

5.2 COMPATIBLE LAND USE

This section provides an evaluation of the compatibility of land uses in the vicinity of Port Columbus International Airport (CMH or Airport) for the Sponsor's Proposed Project and its alternatives. The impacts of each alternative on surrounding land uses and the consistency of the alternatives with the comprehensive plans of the surrounding communities are assessed in accordance with Federal Aviation Administration (FAA) Order 1050.1E, *Environmental Impacts: Policies and Procedures* and FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Projects*.

5.2.1 EXISTING CONDITIONS: 2006

The existing land use patterns within the General Study Area (GSA) are described in Chapter Four, *Affected Environment*. The majority of the land use in the area surrounding the Airport are residential, industrial, and commercial uses. **Exhibit 5.2-1, Generalized Land Use**, graphically depicts the general land use pattern in the GSA.

Existing land use data was collected from Franklin County, municipalities, and townships within the GSA, as well as from reports generated by the Mid-Ohio Regional Planning Commission (MORPC). Land uses in the vicinity of the Airport were categorized in terms of the general land use classifications presented in 14 Code of Federal Regulations (CFR) Part 150, which includes residential (single and multi-family), commercial, public/institutional, and agricultural/recreational/open space. These land uses were identified based on Franklin County's Geographic Information System (GIS) database and additional land use surveys provided by the Columbus Regional Airport Authority (CRAA) or local jurisdictions, and was supplemented as necessary by field verification.

The FAA has identified guidelines relating the compatibility of land use types to airport sound levels. These guidelines are defined in Federal Aviation Regulations, 14 CFR Part 150 (Table 1 of Appendix A), *Land Use Compatibility with Yearly Day-Night Average Sound Levels*. These guidelines, shown in **Table 5.2-1**, delineate the compatibility parameters for residential, public (schools, churches, nursing homes, hospitals, libraries), commercial, manufacturing and production, and recreational land uses.

Housing and Population: The 2000 U.S. Census data was combined with the Franklin County GIS land use database to identify the location of residential land uses in the GSA. Field checking was conducted to verify the location of homes and to identify new or planned development. Population was estimated using a ratio of persons per household based on the Census data and housing unit counts in the area. The number of housing units and the population within each noise contour level were determined by overlaying each noise contour level with the GIS land use and housing structure layers.

**Table 5.2-1
LAND USE COMPATIBILITY GUIDELINES - FAR PART 150**

| <u>LAND USE</u> | YEARLY DAY-NIGHT AVERAGE SOUND LEVEL (DNL) IN DECIBELS | | | | | |
|--------------------------------------------------------------------------|-----------------------------------------------------------|----------------|----------------|----------------|----------------|-------------------|
| | BELOW <u>65</u> | <u>65-70</u> | <u>70-75</u> | <u>75-80</u> | <u>80-85</u> | OVER <u>85</u> |
| <u>RESIDENTIAL</u> | | | | | | |
| Residential, other than mobile homes & transient lodgings | Y | N ¹ | N ¹ | N | N | N |
| Mobile home parks | Y | N | N | N | N | N |
| Transient lodgings | Y | N ¹ | N ¹ | N ¹ | N | N |
| <u>PUBLIC USE</u> | | | | | | |
| Schools, hospitals, nursing homes | Y | 25 | 30 | N | N | N |
| Churches, auditoriums, and concert halls | Y | 25 | 30 | N | N | N |
| Governmental services | Y | Y | 25 | 30 | N | N |
| Transportation | Y | Y | Y ² | Y ³ | Y ⁴ | N ⁴ |
| Parking | Y | Y | Y ² | Y ³ | Y ⁴ | N |
| <u>COMMERCIAL USE</u> | | | | | | |
| Offices, business and professional | Y | Y | 25 | 30 | N | N |
| Wholesale and retail -- building materials, hardware, and farm equipment | Y | Y | Y ² | Y ³ | Y ⁴ | N |
| Retail trade, general | Y | Y | 25 | 30 | N | N |
| Utilities | Y | Y | Y ² | Y ³ | Y ⁴ | N |
| Communication | Y | Y | 25 | 30 | N | N |
| <u>MANUFACTURING AND PRODUCTION</u> | | | | | | |
| Manufacturing, general | Y | Y | Y ² | Y ³ | Y ⁴ | N |
| Photographic and optical | Y | Y | 25 | 30 | N | N |
| Agriculture (except livestock) and forestry | Y | Y ⁶ | Y ⁷ | Y ⁸ | Y ⁸ | Y ⁸ |
| Livestock farming and breeding | Y | Y ⁶ | Y ⁷ | N | N | N |
| Mining and fishing, resource production and extraction | Y | Y | Y | Y | Y | Y |
| <u>RECREATIONAL</u> | | | | | | |
| Outdoor sports arenas and spectator sports | Y | Y | Y ⁵ | N ⁵ | N | N |
| Outdoor music shells, amphitheaters | Y | N | N | N | N | N |
| Nature exhibits and zoos | Y | Y | N | N | N | N |
| Amusements, parks, resorts, and camps | Y | Y | Y | N | N | N |
| Golf courses, riding stables, and water recreation | Y | Y | 25 | 30 | N | N |

Table 5.2-1, *Continued*

LAND USE COMPATIBILITY GUIDELINES - FAR PART 150

The designations contained in this table do not constitute a Federal determination that any use of land covered by the program is acceptable under Federal, State, or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities. FAA determinations under Part 150 are not intended to substitute federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise compatible land uses.

Key To Table A-1

Y (Yes) Land use and related structures compatible without restrictions.

N (No) Land use and related structures are not compatible and should be prohibited.

NLR Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure

25, 30, 35 Land use and related structures generally compatible; measures to achieve a NLR of 25, 30, or 35 dB must be incorporated into design and construction of structure.

Notes for Table A-1

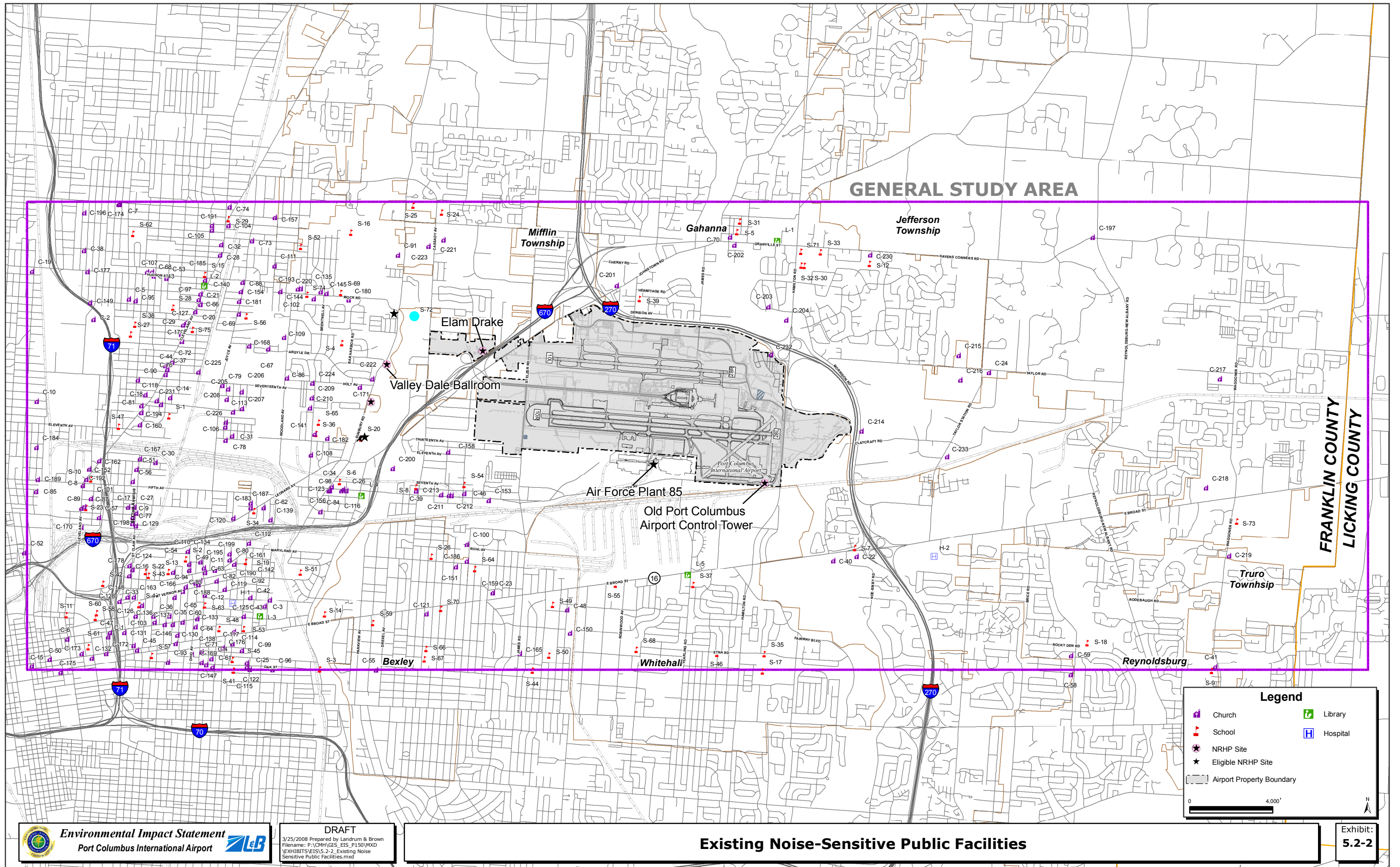
1. Where the community determines that residential or school uses must be allowed, measures to achieve outdoor-to-indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide a NLR of 20 dB, thus, the reduction requirements are often stated as five, 10, or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. However, the use of NLR criteria will not eliminate outdoor noise problems.
2. Measures to achieve NLR of 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
3. Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
4. Measures to achieve NLR of 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
5. Land use compatible provided special sound reinforcement systems are installed.
6. Residential buildings require a NLR of 25 dB.
7. Residential buildings require a NLR of 30 dB.
8. Residential buildings not permitted.

Source: FAR Part 150 Airport Noise Compatibility Planning, Appendix A, Table 1.

Noise-Sensitive Public Facilities: Noise-sensitive public facilities include schools, churches, libraries, hospitals, and nursing homes. The number and location of noise-sensitive public facilities within the Airport environs were derived from a number of different sources. Schools, libraries, hospitals, nursing homes, and churches initially were extracted from Franklin County Auditor data. These facilities were then field-checked to verify their locations. **Table 5.2-2** lists the noise-sensitive public facilities that are graphically depicted on **Exhibit 5.2-2, Existing Noise-Sensitive Public Facilities**.

Historic, Architectural, Archaeological, and Cultural Resources: Following a survey of over 1,400 sites in the GSA, four historic sites have been identified as being listed or eligible for listing in the National Register of Historic Places (NRHP). These sites qualify for protection under Section 4(f) of the Department of Transportation Act¹, which was designed to preserve historic and recreational sites. For more information on historic sites in the GSA, see Section 5.7, *Department of Transportation Section 4(f)*, and Section 5.8, *Historic, Architectural, Archaeological, and Cultural Resources*. Exhibit 5.2.-2 includes the location of the four historic sites in the GSA.

¹ Section 4(f) of the Department of Transportation Act of 1966 is currently codified at 49 U.S.C. Section 303(c). Consistent with FAA Order 1050.1E, Appendix 1, paragraph 6.1a, Section 303(c) will be referred to as Section 4(f).



**Table 5.2-2
NOISE-SENSITIVE PUBLIC FACILITIES
Port Columbus International Airport**

| Map ID | Name |
|-----------------|----------------------------------------------------|
| Churches | |
| C-1 | Zion Lighthouse Spiritualist Church |
| C-2 | World Peace Healing Temple |
| C-3 | Woodland Christian Church |
| C-4 | Wilson Avenue Church |
| C-5 | Williams Temple Pentecostal Church |
| C-6 | Welsh Presbyterian Church (historic) |
| C-7 | Weber Road Alliance Church |
| C-8 | Way of Holiness Church |
| C-9 | Unveiling and Unfolding of the Truth Ministries |
| C-10 | University Bible Fellowship Church |
| C-11 | Union Tabernacle Church of God |
| C-12 | Union Grove Baptist Church |
| C-14 | The Greater 12th Baptist Church |
| C-15 | Trinity Episcopal Church |
| C-16 | Trinity Baptist Church |
| C-17 | Triedstone Baptist Church |
| C-18 | Travelers Rest Baptist Church |
| C-19 | Temple of Psychic Prophecy |
| C-20 | Temple of Faith Church of Deliverance |
| C-21 | Temple of Faith Church |
| C-22 | Temple Israel |
| C-23 | Temple Beth Shalom |
| C-24 | Taylor Station Church |
| C-25 | Tabernacle of Christian Fellowship |
| C-26 | Strong Tower Church of Christ |
| C-27 | Spring Hill Baptist Church |
| C-28 | Spanish Evangelistic Association of the Living God |
| C-29 | Lighthouse Community Baptist Church |
| C-30 | Solid Rock Baptist Church |
| C-31 | Sigsbee Avenue Church of God |
| C-32 | Shining Light Bible Mission Church |
| C-33 | Shiloh Baptist Church |
| C-34 | Shepard United Methodist Church |
| C-35 | Shady Grove Baptist Church of Christ |
| C-36 | Second Baptist Church |
| C-37 | Sanctified Temple Church of God in Christ |
| C-38 | Salvation Army Chapel Church |
| C-39 | Saint Thomas the Apostle Roman Catholic Church |
| C-40 | Saint Theresa's Shrine |
| C-41 | Saint Pius X Catholic Church |
| C-42 | Saint Philips Episcopal Church |
| C-43 | Saint Philip Lutheran Church |
| C-44 | Saint Peters Evangelical Lutheran Church |

Table 5.2-2, *Continued*
NOISE-SENSITIVE PUBLIC FACILITIES
Port Columbus International Airport

| Map ID | Name |
|-----------------------------------|----------------------------------------------------|
| Churches, <i>Continued</i> | |
| C-45 | Saint Paul's Episcopal Church |
| C-46 | Living Word Church |
| C-47 | Saint Paul African Methodist Episcopal Church |
| C-48 | Saint Mary's Macedonian Eastern Orthodox Church |
| C-49 | Saint Mark African Methodist Episcopal Church |
| C-50 | Saint Joseph Cathedral |
| C-51 | Saint Johns Baptist Church |
| C-52 | Saint John the Baptist Roman Catholic Church |
| C-53 | Saint James Baptist Church |
| C-54 | Saint Dominic Roman Catholic Church |
| C-55 | Saint Albans Church |
| C-56 | Ruth Temple Apostolic Original Holy Church of God |
| C-57 | Rose of Sharon Baptist Church |
| C-58 | Rose Hill Church of God |
| C-59 | Reynoldsburg Baptist Church |
| C-60 | Rehoboth Temple |
| C-61 | Refuge Church of Christ |
| C-62 | Purple Rose Temple of Truth Spiritualist Church |
| C-63 | Praise Temple Christian Methodist Episcopal Church |
| C-64 | Pleasant Hill Church of the Living God |
| C-65 | Pilgrim Baptist Church |
| C-66 | Pentecostal House of Prayer |
| C-67 | Peace Baptist Mission |
| C-68 | Pathway to Power Baptist Church |
| C-69 | Original Glorious Church of God in Christ |
| C-70 | Old Peace Lutheran Church |
| C-71 | Ohio Union Steadfast Primitive Church |
| C-72 | Northside Church of God |
| C-73 | Northeast Church of Christ |
| C-74 | North Linden Baptist Church |
| C-76 | Beginning Missionary Baptist Church |
| C-77 | New Bethlehem Baptist Church |
| C-78 | Mount Zion Missionary Baptist Church |
| C-79 | Mount Zion Church of God in Christ |
| C-80 | Mount Zion Church of God in Christ |
| C-81 | Mount Victory Baptist Church |
| C-82 | Mount Vernon Avenue Missionary Baptist Church |
| C-83 | Mount Vernon African Methodist Episcopal Church |
| C-84 | Mount Sinai Missionary Baptist Church |
| C-85 | Mount Sinai Holy Temple |
| C-86 | Great St. Paul Church |
| C-87 | Mount Pisgah Baptist Church |
| C-88 | Mount Pisgah Baptist Church |

Table 5.2-2, *Continued*
NOISE-SENSITIVE PUBLIC FACILITIES
Port Columbus International Airport

| Map ID | Name |
|-----------------------------------|----------------------------------------------------|
| Churches, <i>Continued</i> | |
| C-89 | Mount Nebo Baptist Mission |
| C-90 | Living Charity Church |
| C-91 | Mount Herman Baptist Church |
| C-92 | Mount Calvary Holy Church |
| C-93 | Metropolitan Baptist Church |
| C-94 | Meredith Temple Church of God in Christ |
| C-95 | Maynard Avenue Baptist Church |
| C-96 | Masjid Al-Islam Mosque |
| C-97 | Man in Christ Ministries |
| C-98 | Loving Charity Baptist Church |
| C-99 | Love Zion Baptist Church |
| C-100 | Lord of Life Fellowship Church |
| C-101 | Lord Jesus Christ of Apostolic Faith Church |
| C-102 | Living Faith Apostolic Church |
| C-103 | Little Flock Church |
| C-104 | Linden United Methodist Church |
| C-105 | Linden Spiritualist Church |
| C-106 | Lee Avenue United Methodist Church |
| C-107 | Kingdom Hall of Jehovah's Witnesses |
| C-108 | New Horizons Christian Fellowship Church |
| C-109 | Jordan Baptist Church |
| C-110 | Jireh House Full Gospel Church |
| C-111 | Jesus People Evangelistic Center |
| C-112 | Jerusalem Tabernacle Baptist Church |
| C-113 | Jerusalem Baptist Church |
| C-114 | Islamic Center Church |
| C-115 | International Gospel Center |
| C-116 | Independent Missionary Church of God in Christ |
| C-117 | House of God Holy Church |
| C-118 | Holy Temple Church of God |
| C-119 | Holy Church of God |
| C-120 | Holy Carmel Holy Church of America |
| C-121 | Agudas Achim Congregation |
| C-122 | Apostolic Assembly of Our Lord Jesus Christ Church |
| C-123 | Apostolic Faith Tabernacle |
| C-124 | Apostolic Glorious Church |
| C-125 | Asbury Church |
| C-126 | Bethany Presbyterian Church |
| C-127 | Bethel African Methodist Episcopal Church |
| C-128 | Bethel Baptist Church |
| C-129 | Bethel Holy Temple Church of God |
| C-130 | Broad Street Christian Church |
| C-131 | Broad Street Presbyterian Church |

Table 5.2-2, *Continued*
NOISE-SENSITIVE PUBLIC FACILITIES
Port Columbus International Airport

| Map ID | Name |
|-----------------------------------|------------------------------------------------|
| Churches, <i>Continued</i> | |
| C-132 | Broad Street United Methodist Church |
| C-133 | Calhoun's Memorial Temple Church |
| C-134 | Calvary Tremont Baptist Church |
| C-135 | Power of Faith Ministries |
| C-136 | Centenary United Methodist Church |
| C-137 | Christ Memorial Baptist Church |
| C-138 | Christian Home Ministry Church |
| C-139 | Church in Jesus Christ |
| C-140 | Pleasant Green Baptist Church |
| C-141 | Church of Christ Apostolic Faith |
| C-142 | Church of God and Saint of Christ |
| C-143 | Church of God of Franklin County |
| C-144 | Church of God of Prophecy |
| C-145 | Church of Spiritual Unity |
| C-146 | Church of Universal Forces |
| C-147 | Church of the Living God |
| C-148 | Church of the Living God |
| C-149 | Columbus Chinese Christian Church |
| C-150 | Columbus Eastwood Seventh Day Adventist Church |
| C-151 | Community Baptist Church |
| C-152 | Consolidated Baptist Church |
| C-153 | Corinthian Baptist Church |
| C-154 | Cornerstone Church |
| C-156 | Deliverance Church of God |
| C-157 | East Linden United Methodist Church |
| C-158 | East Mount Olivet Baptist Church |
| C-159 | Eastminster Church |
| C-160 | Eliezer Church of Our Lord Jesus Christ |
| C-161 | Emmanuel Community Baptist Church |
| C-162 | Emmanuel Holy Church of God |
| C-163 | Emmanuel Tabernacle Baptist Church |
| C-165 | Fairmoor Presbyterian Church |
| C-166 | Faith Mission United Methodist Church |
| C-167 | Faith Tabernacle |
| C-168 | Faith Tabernacle Church of God in Christ |
| C-169 | Faith Temple Apostolic Holiness Church of God |
| C-170 | Faith Temple House of Prayer |
| C-171 | Christian Outreach Ministries |
| C-172 | First Baptist Church |
| C-173 | First Congregational Church |
| C-174 | First Spiritualist Church of Sprit Revelation |
| C-175 | First Spiritualist Temple |
| C-176 | Flintridge Baptist Church |

Table 5.2-2, *Continued*
NOISE-SENSITIVE PUBLIC FACILITIES
Port Columbus International Airport

| Map ID | Name |
|-----------------------------------|------------------------------------------------------|
| Churches, <i>Continued</i> | |
| C-177 | Free Pentecostal Church of God |
| C-178 | Freewill Pentecostal Holiness Church of Christ |
| C-179 | C.R.A.C.K. House Ministries Church |
| C-180 | Anointed Touch Ministries |
| C-181 | Galilee Baptist Church |
| C-182 | Gay Tabernacle Baptist Church |
| C-183 | Gods House of Prayer |
| C-184 | Good Neighbor Community Church |
| C-185 | Good Shepherd Baptist Church |
| C-186 | Good Shepherd Church |
| C-187 | Goodwill Baptist Church |
| C-188 | Gospel Tabernacle Church |
| C-189 | Grace Bible Baptist Church |
| C-190 | Grace Temple |
| C-191 | Greater Emmanuel Apostolic Faith Church |
| C-192 | Greater Emmanuel Church |
| C-193 | Greater Harvest Baptist Church |
| C-194 | Greater Liberty Temple Church |
| C-195 | Greater Life Evangelistic Temple |
| C-196 | Greater Light Church of the Living God |
| C-197 | Havens Corners Church of Christ in Christian Union |
| C-198 | Higher Ground Always Abounding Assembly Church |
| C-199 | Highway Church of God |
| C-200 | Lutheran Village of Columbus |
| C-201 | Victory In Pentecost |
| C-202 | Mifflin Presbyterian Church |
| C-203 | Christian Center Church |
| C-204 | Shepherd Church of the Nazarene and Christian School |
| C-205 | Everlasting Life Ministries |
| C-206 | New Tabernacle Church of God in Christ |
| C-207 | Ephphatha New Ministries |
| C-208 | Paradise Baptist Church |
| C-209 | Temple of Faith Church of the Living God |
| C-210 | Aenon Missionary Baptist Church |
| C-211 | Faith Comes by Hearing Christian Center |
| C-212 | Apostolic House of Worship |
| C-213 | Redeemed Christian Church of God |
| C-214 | Mt. Judia Church |
| C-215 | United Baptist Church |
| C-216 | Country Fellowship Church |
| C-217 | East Pointe Christian Church |
| C-218 | East Side Brethren Grace Church |
| C-219 | St. Mary Church |

Table 5.2-2, *Continued*
NOISE-SENSITIVE PUBLIC FACILITIES
Port Columbus International Airport

| Map ID | Name |
|-----------------------------------|-------------------------------------------------------|
| Churches, <i>Continued</i> | |
| C-220 | Church of God Militant Pillar and the Ground of Truth |
| C-221 | Columbus Christian Center Church |
| C-222 | Eternal Life Church of Christ |
| C-223 | Advent United Church of Christ |
| C-224 | Jerusalem Deliverance Church of God in Christ |
| C-225 | The House of God Church |
| C-226 | Terry Lee Center |
| C-230 | St. Matthews Church |
| C-231 | Greater Liberty Temple |
| C-232 | Wonderland Community Church |
| C-233 | Greater Works Ministries |
| Hospitals | |
| H-1 | University Hospital East |
| H-2 | Mount Carmel Hospital East |
| Libraries | |
| L-1 | Gahanna Library |
| L-2 | Columbus Library Linden Branch |
| L-3 | Martin Luther King Library |
| L-4 | Shepard Library |
| L-5 | Whitehall Library |
| Schools | |
| S-1 | Windsor Alternative Elementary School |
| S-2 | Trevitt Elementary School |
| S-3 | The Columbus Academy |
| S-4 | South Mifflin Elementary School |
| S-5 | Shepard Street School (historic) |
| S-6 | Shepard School |
| S-7 | School Number 5 (historic) |
| S-8 | Saint Thomas the Apostle School |
| S-9 | Saint Pius School |
| S-10 | Saint Peters School |
| S-11 | Saint Patrick's School |
| S-12 | Saint Matthews School |
| S-13 | Saint Dominic School |
| S-14 | Saint Charles Seminary |
| S-15 | Saint Augustine School |
| S-16 | Rosemont High School |
| S-17 | Rose More School |
| S-18 | Rose Hill Elementary School |
| S-19 | Pilgrim Elementary School |
| S-20 | Ohio Dominican University |
| S-22 | Monroe Junior High School |
| S-23 | Milo School |

Table 5.2-2, *Continued*
NOISE-SENSITIVE PUBLIC FACILITIES
Port Columbus International Airport

| Map ID | Name |
|----------------------------------|---------------------------------------------|
| Schools, <i>Continued</i> | |
| S-24 | Mifflin Junior High School |
| S-25 | Mifflin High School |
| S-26 | Maryland Avenue Elementary School |
| S-27 | Linmoor Alternative School |
| S-28 | Linden McKinley High School |
| S-29 | Linden Elementary School |
| S-30 | Lincoln Schools |
| S-31 | Lincoln School |
| S-32 | Lincoln High School |
| S-33 | Lincoln Elementary School |
| S-34 | Leonard School |
| S-35 | Kay Avenue Elementary School |
| S-36 | Karl F Smith Bible School |
| S-37 | Holy Spirit School |
| S-38 | Hamilton School |
| S-39 | Goshen Lane Elementary School |
| S-40 | Garfield School |
| S-41 | Franklin Middle School |
| S-42 | Fort Hayes Career Center |
| S-43 | Felton School |
| S-44 | Fairmoor Elementary School |
| S-45 | Fair Elementary School |
| S-46 | Etna Road Elementary School |
| S-47 | CMHA Institution |
| S-48 | Eastwood Avenue School |
| S-49 | Eastmoor Junior High School |
| S-50 | Eastmoor High School |
| S-51 | Eastgate Elementary School |
| S-52 | East Linden Elementary School |
| S-53 | East High School |
| S-54 | East Columbus Elementary School |
| S-55 | East Broad Street School |
| S-56 | Duxberry Park School |
| S-57 | Douglas Alternative Elementary School |
| S-58 | Columbus State Community College |
| S-59 | Columbus School for Girls |
| S-60 | Columbus Community College |
| S-61 | Columbus College of Art and Design |
| S-62 | Columbus Alternative High School |
| S-63 | Champion Alternative Middle School |
| S-64 | Broadleigh Elementary School |
| S-65 | Oakland Park at Brentnell Elementary School |
| S-66 | Bexley Junior High School |

Table 5.2-2, Continued
NOISE-SENSITIVE PUBLIC FACILITIES
Port Columbus International Airport

| Map ID | Name |
|---------------------------|----------------------------------|
| Schools, Continued | |
| S-67 | Bexley High School |
| S-68 | Beechwood Elementary School |
| S-69 | Arlington Park Elementary School |
| S-70 | Agudas Achim School |
| S-71 | Columbus State Community College |
| S-73 | Waggoner Road Middle School |
| S-74 | FCI Academy |
| S-75 | Gladstone Elementary School |

Source: Landrum & Brown, 2007.

5.2.2 FUTURE CONDITIONS: 2012

The following section discusses the land use impacts of the Sponsor's Proposed Project and its alternatives in 2012, which includes quantifying the number of residential and other noise-sensitive land uses that are impacted by aircraft noise for each of the 2012 alternatives. Impacts are determined according to the FAA land use compatibility guidelines, relating types of land use to airport sound levels shown in Table 5.2-1.

5.2.2.1 Alternative A: No Action

This section provides a summary of the residential population, housing units, and noise-sensitive facilities affected by noise levels for the 2012 Alternative A: No Action.

Land Use Incompatibilities: Table 5.2-3 shows the number of housing units, residents, and noise-sensitive facilities located within the 2012 Alternative A: No Action noise contour. There are 693 housing units and an estimated 1,712 residents located within the 65+ Day-Night Average Sound Level (DNL) of the 2012 Alternative A: No Action noise contour. Of those 693 housing units, 638 are within the City of Columbus and 55 are within Mifflin Township. A total of 357 of those housing units have received sound insulation and are therefore considered mitigated. There are three churches and one school located within the 65+ DNL of the 2012 Alternative A: No Action noise contour, the Christian Outreach Ministries, the Eternal Life Church of Christ, the Mt. Judia Church, and South Mifflin Elementary School (which has received sound insulation). Table 5.2-4 summarizes the housing unit and population impacts for all of the 2012 alternatives.

**Table 5.2-3
2012 ALTERNATIVE A: NO ACTION HOUSING, POPULATION, AND
NOISE-SENSITIVE FACILITY INCOMPATIBILITIES
Port Columbus International Airport**

| | 60-65 DNL * | 65-70 DNL | 70-75 DNL | 75+ DNL | 65+ DNL |
|--------------------------------------------------------------|------------------------|----------------------|----------------------|--------------------|--------------------|
| Housing Units | | | | | |
| Columbus | 5,139 | 638 | 0 | 0 | 638 |
| Mitigated | | | | | |
| Sound Insulated ¹ | 326 | 322 | 0 | 0 | 322 |
| Easement ² | 191 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated ³ | 106 | 61 | 0 | 0 | 61 |
| Not Previously Mitigated ⁴ | 4,516 | 255 | 0 | 0 | 255 |
| Mifflin Township | 17 | 55 | 0 | 0 | 55 |
| Mitigated | | | | | |
| Sound Insulated | 1 | 35 | 0 | 0 | 35 |
| Easement | 0 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 3 | 17 | 0 | 0 | 17 |
| Not Previously Mitigated | 13 | 3 | 0 | 0 | 3 |
| Gahanna | 194 | 0 | 0 | 0 | 0 |
| Mitigated | | | | | |
| Sound Insulated | 3 | 0 | 0 | 0 | 0 |
| Easement | 0 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 1 | 0 | 0 | 0 | 0 |
| Not Previously Mitigated | 190 | 0 | 0 | 0 | 0 |
| Jefferson Township | 56 | 0 | 0 | 0 | 0 |
| Mitigated | | | | | |
| Sound Insulated | 0 | 0 | 0 | 0 | 0 |
| Easement | 27 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 0 | 0 | 0 | 0 | 0 |
| Not Previously Mitigated | 29 | 0 | 0 | 0 | 0 |
| Total Housing Units | 5,406 | 693 | 0 | 0 | 693 |
| Population | | | | | |
| Total Population | 13,353 | 1,712 | 0 | 0 | 1,712 |
| Noise-Sensitive Facilities | | | | | |
| Churches | 38 | 3 | 0 | 0 | 3 |
| Schools | 7 | 1 | 0 | 0 | 1 |
| Libraries | 0 | 0 | 0 | 0 | 0 |
| Hospitals | 0 | 0 | 0 | 0 | 0 |
| Nursing Homes | 0 | 0 | 0 | 0 | 0 |

Notes:

- * 14 CFR Part 150 Land Use Compatibility Guidelines indicate that residential land uses are compatible with noise levels below 65 DNL. Counts of housing units below 65 DNL are provided for informational purposes only.
- 1. Homes that have previously received sound insulation.
- 2. Homes that have an avigation easement.
- 3. Homes that were previously offered sound insulation but declined.
- 4. Homes that have not received and were never offered sound insulation or avigation easement by the CAAA.

Source: Landrum & Brown, 2007.

**Table 5.2-4
COMPARISON OF HOUSING, POPULATION, AND NOISE-SENSITIVE
FACILITY INCOMPATIBILITIES FOR 2012 ALTERNATIVES
Port Columbus International Airport**

| CATEGORY | 2012 ALTERNATIVE A: NO ACTION | 2012 ALTERNATIVE C2a | 2012 ALTERNATIVE C2b | 2012 ALTERNATIVE C3a | 2012 ALTERNATIVE C3b |
|----------------------------------------------------------------------------------------------------|-------------------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| Housing Units | | | | | |
| 65-70 DNL | 693 | 725 | 507 | 700 | 473 |
| 70-75 DNL | 0 | 0 | 0 | 0 | 0 |
| 75+ DNL | 0 | 0 | 0 | 0 | 0 |
| 65+ DNL | 693 | 725 | 507 | 700 | 473 |
| Population | | | | | |
| 65-70 DNL | 1,712 | 1,791 | 1,252 | 1,729 | 1,168 |
| 70-75 DNL | 0 | 0 | 0 | 0 | 0 |
| 75+ DNL | 0 | 0 | 0 | 0 | 0 |
| 65+ DNL | 1,712 | 1,791 | 1,252 | 1,729 | 1,168 |
| Noise Sensitive Facilities (Churches, Schools, Libraries, Hospitals, and Nursing Homes) | | | | | |
| 65-70 DNL | 4 | 1 | 0 | 0 | 0 |
| 70-75 DNL | 0 | 0 | 0 | 0 | 0 |
| 75+ DNL | 0 | 0 | 0 | 0 | 0 |
| 65+ DNL | 4 | 1 | 0 | 0 | 0 |

Source: Landrum & Brown, 2007.

5.2.2.2 Alternative C2a: 2012 Relocate Runway 10R/28L 800 Feet to the South – Noise Abatement Scenario A

This section provides a summary of the potential land use impacts, including impacts to residential population, housing units, and noise-sensitive facilities affected by the 2012 Alternative C2a noise contour.

Land Use Incompatibilities: Table 5.2-5 shows the number of housing units, residents, and noise-sensitive facilities located within the 2012 Alternative C2a noise contour. Table 5.2-4 shows a comparison of the number of housing units, residents, and noise-sensitive facilities for all of the 2012 alternatives. There are 725 housing units and an estimated 1,791 residents located within the 65+ DNL of the 2012 Alternative C2a noise contour. A total of 318 of those housing units have received sound insulation (282 in Columbus and 36 in Mifflin Township) from the CRAA and are therefore considered previously mitigated. The CRAA has obtained an avigation easement on one additional housing unit located in Columbus. There is one church, the East Mount Olivet Baptist Church, located within the 65+ DNL of the 2012 Alternative C2a noise contour. There are no schools, libraries, hospitals, or nursing homes located within the 65+ DNL of the 2012 Alternative C2a noise contour.

**Table 5.2-5
HOUSING, POPULATION, AND NOISE-SENSITIVE FACILITY
INCOMPATIBILITIES - 2012 ALTERNATIVE C2a
Port Columbus International Airport**

| | 60-65 DNL * | 65-70 DNL | 70-75 DNL | 75+ DNL | 65+ DNL |
|--------------------------------------------------------------|------------------------|----------------------|----------------------|--------------------|--------------------|
| Housing Units | | | | | |
| Columbus | 5,610 | 667 | 0 | 0 | 667 |
| Mitigated | | | | | |
| Sound Insulated ¹ | 370 | 282 | 0 | 0 | 282 |
| Easement ² | 373 | 1 | 0 | 0 | 1 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated ³ | 91 | 77 | 0 | 0 | 77 |
| Not Previously Mitigated ⁴ | 4,776 | 307 | 0 | 0 | 307 |
| Mifflin Township | 12 | 58 | 0 | 0 | 58 |
| Mitigated | | | | | |
| Sound Insulated | 0 | 36 | 0 | 0 | 36 |
| Easement | 0 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 1 | 19 | 0 | 0 | 19 |
| Not Previously Mitigated | 11 | 3 | 0 | 0 | 3 |
| Gahanna | 31 | 0 | 0 | 0 | 0 |
| Mitigated | | | | | |
| Sound Insulated | 1 | 0 | 0 | 0 | 0 |
| Easement | 0 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 1 | 0 | 0 | 0 | 0 |
| Not Previously Mitigated | 29 | 0 | 0 | 0 | 0 |
| Jefferson Township | 15 | 0 | 0 | 0 | 0 |
| Mitigated | | | | | |
| Sound Insulated | 0 | 0 | 0 | 0 | 0 |
| Easement | 0 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 0 | 0 | 0 | 0 | 0 |
| Not Previously Mitigated | 15 | 0 | 0 | 0 | 0 |
| Total Housing Units | 5,668 | 725 | 0 | 0 | 725 |
| Population | | | | | |
| Total Population | 14,000 | 1,791 | 0 | 0 | 1,791 |
| Noise-Sensitive Facilities | | | | | |
| Churches | 37 | 1 | 0 | 0 | 0 |
| Schools | 8 | 0 | 0 | 0 | 0 |
| Libraries | 0 | 0 | 0 | 0 | 0 |
| Hospitals | 0 | 0 | 0 | 0 | 0 |
| Nursing Homes | 0 | 0 | 0 | 0 | 0 |

Notes:

*14 CFR Part 150 Land Use Compatibility Guidelines indicate that residential land uses are compatible with noise levels below 65 DNL. Counts of housing units below 65 DNL are provided for informational purposes only.

1. Homes that have previously received sound insulation.
2. Homes that have an avigation easement.
3. Homes that were previously offered sound insulation but declined.
4. Homes that have not received and were never offered sound insulation or avigation easement by the CRAA.

Source: Landrum & Brown, 2007.

Consistency with Local Land Use Plan: This section describes the affects of this alternative on land use and the compatibility with local land use plans. Alternative C2a would result in impacts to a number of facilities that could affect future land use patterns within the surrounding jurisdictions.

The construction of replacement Runway 10R/28L 800 feet to the south of existing Runway 10R/28L would require the acquisition of 36 residential properties for clearing the Runway Protection Zone (RPZ) and vacating all of East 13th Avenue east of Sterling Avenue (see Exhibit 5.3-2 in Section 5.3, *Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks*). These 36 properties are the eastern-most properties on the street and are bounded by Airport property on two sides. The acquisition and relocation of the residents from these 36 properties is considered an impact of this alternative. Because the 35 housing units and one vacant lot represents a small percentage of the overall neighborhood and are located on the edge of the neighborhood, removing these housing units would not constitute a significant impact to the overall pattern of land use in this area. Section 5.3, *Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks*, further discusses the potential impacts of these acquisitions.

Portions of the Columbus International Air Center (CIAC) would be acquired and removed to allow the installation of a CAT II/III Instrument Landing System (ILS) to Runway 10R. The displaced tenants could be relocated elsewhere on the Airport for those needing airfield access or within Franklin County for those not requiring airfield access. The specific location of on-Airport or off-Airport sites would be done prior to relocation if this alternative were implemented. The land use of the remaining buildings on the CIAC campus could remain warehousing/commercial, so there would not be a change in land use.

The Airport Golf Course, located east of the Airport, would be reconfigured as a result of relocating Runway 10R/28L 800 feet to the south. The approach lighting system, which currently is located in the golf course, would be shifted 800 feet to the south and cause at least nine holes to be reconfigured. During re-construction of the golf course, it is the desire of both the CRAA and the City of Columbus to maintain a minimum of nine holes. The feasibility of this will be further analyzed and determined during the design phase of the project. Because the land use is expected to be maintained and the golf course would return to a full 18-hole facility, there would be no impact to the existing land use. The reconfiguration of the Airport Golf Course is discussed further in Section 5.7, *Department of Transportation Section 4(f) Lands*.

Stormwater Detention Basin: One entrance driveway and 24 parking spaces associated with the 94th Aerosquadron restaurant would be removed to allow for expansion of the ravine located south of Sawyer Road. The ravine is a small tributary of Big Walnut Creek and the proposed expansion will allow stormwater drainage during construction and operation from the proposed airfield projects. The driveway off Sawyer Road will be relocated in-kind, west of the present location and replacement parking areas will be constructed west of the building resulting in no net loss in parking capacity or access to the restaurant. Because there are two

entrance driveways to the restaurant and an abundance of parking, disruption of access and parking for the restaurant would be temporary and minimal.

Mitigation Commitments: Mitigation for this alternative includes offering sound insulation to homes affected by significant noise levels and providing relocation assistance to the residents that would be displaced to clear the RPZ.

Sound Insulation

The CRAA prepared an update to the CMH Noise Compatibility Program in 2007 (2007 Part 150 Study).² One of the recommendations of the 2007 Part 150 Study is to offer sound insulation to eligible homes that are located within and adjacent³ to an approved 65 DNL noise contour (Measure LU-1). If Alternative C2a were selected as the preferred alternative and implemented, the sound insulation eligibility boundary would be updated to reflect the area graphically depicted on **Exhibit 5.2-3, 2012 Alternative C2a - Proposed Sound Insulation Boundary**. Within this boundary, there are 422 housing units⁴ that would be eligible for sound insulation under this alternative. There are homes within the 65 DNL Noise Contour that were built within a published Noise Exposure Map (graphically depicted in green on Exhibit 5.2-3). The 2007 Part 150 Study concluded that these homes are not eligible for noise mitigation due to the FAA's Final Policy on Noise Mitigation, published in 1998. An analysis was conducted for this EIS to determine if there would be an increase in noise in these areas as a result of implementing this alternative. It was found that Alternative C2a would not increase noise levels in these areas. Therefore, these homes would not be eligible for noise mitigation in this EIS.

Relocation Assistance

A negotiated purchase program would be offered to the 36 properties located inside and adjacent to the RPZ. A negotiated purchase program is the purchase of real property through negotiation (i.e., the offer of fair market value) and involves the payment of relocation assistance and moving expenses, which is consistent with the *Uniform Relocation Assistance and Real Property Acquisition Policies Act* (49 CFR Part 24). The acquired property would be converted to open space, which is a land use that is compatible with RPZs. Section 5.3, *Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks*, discusses the relocation assistance that would be offered to these residents.

² Final 2007 Part 150 Noise Compatibility Program Update, November 2007. FAA Record of Approval is anticipated in June 2008.

³ To remain consistent with FAA and CRAA policies regarding sound insulation eligibility, housing units that are adjacent to the 65+ DNL would be included in the sound insulation program to preserve the integrity of contiguous, stable, and viable residential neighborhoods of similar housing design, construction type, and materials.

⁴ This includes 296 unmitigated housing units that are within the 65 DNL Noise Contour and 126 unmitigated housing units that are within the proposed sound insulation boundary adjacent to the 65 DNL Noise Contour for this alternative that would be eligible for mitigation.

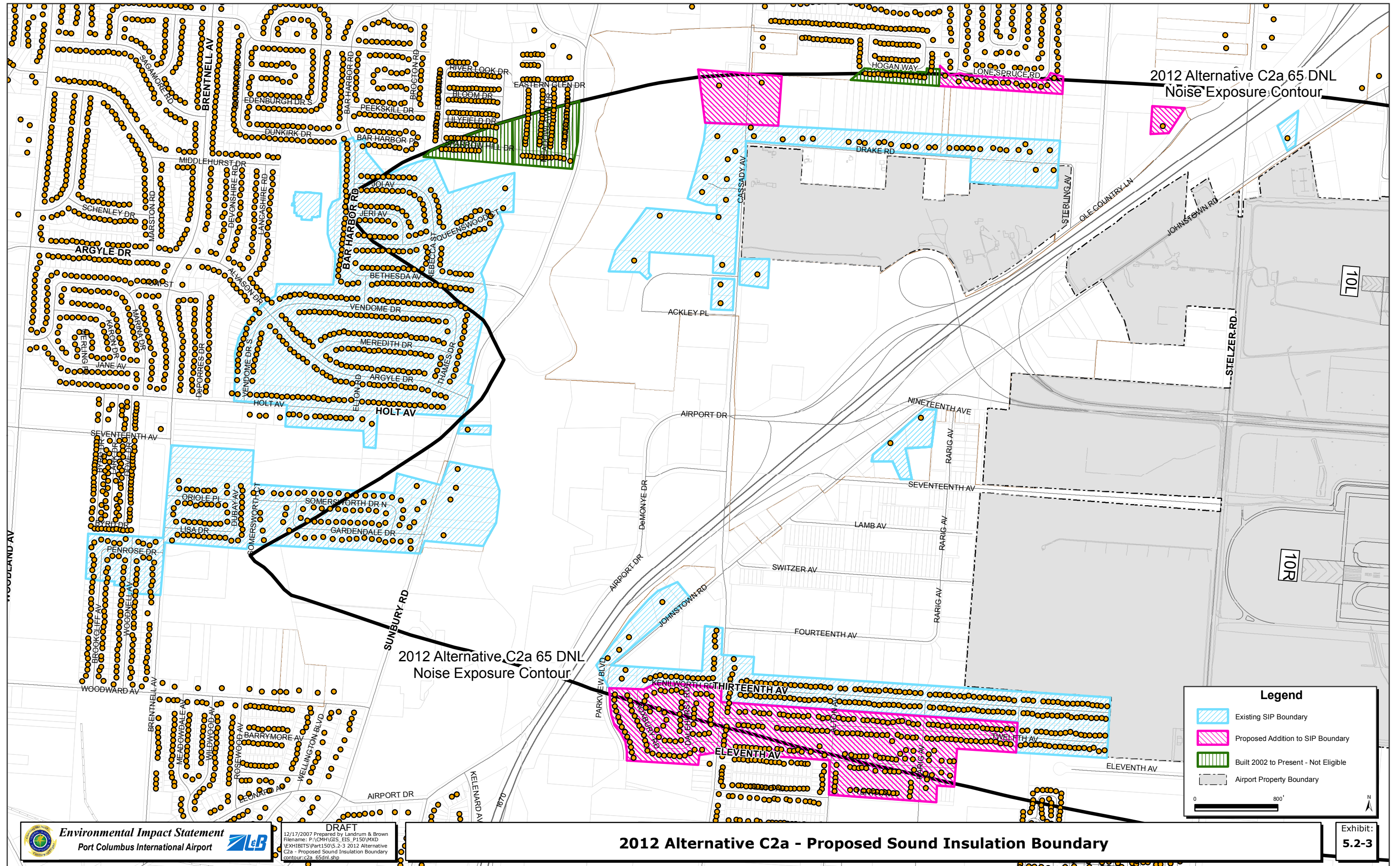
5.2.2.3 Alternative C2b: 2012 Relocate Runway 10R/28L 800 Feet to the South – Noise Abatement Scenario B

This section provides a summary of the potential land use impacts, including impacts to residential population, housing units, and noise-sensitive facilities affected by the 2012 Alternative C2b noise contour. **Land Use Incompatibilities:** **Table 5.2-6** shows the number of housing units, residents, and noise-sensitive facilities located within the 2012 Alternative C2b noise contour. Table 5.2-4 shows a comparison of the number of housing units, residents, and noise-sensitive facilities for all of the 2012 alternatives. There are 507 housing units and an estimated 1,252 residents located within the 65+ DNL of the 2012 Alternative C2b noise contour. A total of 238 of those housing units have received sound insulation (203 in Columbus and 35 in Mifflin Township) from the CAAA and are therefore considered previously mitigated. There are no churches, schools, libraries, hospitals, or nursing homes located within the 65+ DNL of the 2012 Alternative C2b noise contour.

Consistency with Local Land Use Plan: This section describes the affects of this alternative on land use and the compatibility with local land use plans. Alternative C2b would result in impacts to a number of facilities that could affect future land use patterns within the surrounding jurisdictions. The impacts described under Alternative C2a for the acquisition of homes in East Columbus, the removal of portions of the CIAC, and the reconfiguration of the Airport Golf Course would remain the same for Alternative C2b.

In addition, Alternative C2b includes a number of recommended land use measures from the 2007 Part 150 Study that could potentially impact land use and development patterns around the Airport. The land use measures are intended to enhance land use compatibility surrounding the Airport through the implementation of land use restrictions. Currently, the City of Columbus and Franklin County have adopted an Airport Environs Overlay (AEO) District that corresponds to the 65-70, 70-75, and 75+ DNL contours of the most recent Noise Exposure Map (NEM) for the Airport. Within the AEO, development standards are enacted that restrict residential land uses in the highest noise areas and provides for aviation easements in the areas of 65–70 DNL. Two problems have occurred with this program: lack of implementation by the City of Gahanna and Jefferson Township; and the AEO boundary changes every time the NEMs are updated for the Airport (which occurs every three years on average).

In response to these issues, the 2007 Part 150 Study recommends that a fixed-boundary approach be implemented where the boundaries are larger than the 65 DNL of the most recent NEM. The approach of creating fixed-boundaries is recommended as Measure LU-12 in the 2007 Part 150 Noise Compatibility Study Update. This approach to land use planning was discussed with the local planning jurisdictions on several occasions throughout the development of the 2007 Part 150 Study. While it is not possible to get assurance on the implementation of the recommendations of the land use measures in a Part 150 Study, the local planning jurisdictions have participated in the



**Table 5.2-6
HOUSING, POPULATION, AND NOISE-SENSITIVE FACILITY
INCOMPATIBILITIES - 2012 ALTERNATIVE C2b
Port Columbus International Airport**

| | 60-65 DNL * | 65-70 DNL | 70-75 DNL | 75+ DNL | 65+ DNL |
|--------------------------------------------------------------|------------------------|----------------------|----------------------|--------------------|--------------------|
| Housing Units | | | | | |
| Columbus | 5,366 | 451 | 0 | 0 | 451 |
| Mitigated | | | | | |
| Sound Insulated ¹ | 449 | 203 | 0 | 0 | 203 |
| Easement ² | 525 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated ³ | 102 | 66 | 0 | 0 | 66 |
| Not Previously Mitigated ⁴ | 4,290 | 182 | 0 | 0 | 182 |
| Mifflin Township | 14 | 55 | 0 | 0 | 55 |
| Mitigated | | | | | |
| Sound Insulated | 1 | 35 | 0 | 0 | 35 |
| Easement | 0 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 1 | 19 | 0 | 0 | 19 |
| Not Previously Mitigated | 12 | 1 | 0 | 0 | 1 |
| Gahanna | 138 | 1 | 0 | 0 | 1 |
| Mitigated | | | | | |
| Sound Insulated | 3 | 0 | 0 | 0 | 0 |
| Easement | 0 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 0 | 1 | 0 | 0 | 1 |
| Not Previously Mitigated | 135 | 0 | 0 | 0 | 0 |
| Jefferson Township | 22 | 0 | 0 | 0 | 0 |
| Mitigated | | | | | |
| Sound Insulated | 0 | 0 | 0 | 0 | 0 |
| Easement | 0 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 0 | 0 | 0 | 0 | 0 |
| Not Previously Mitigated | 22 | 0 | 0 | 0 | 0 |
| Total Housing Units | 5,540 | 507 | 0 | 0 | 507 |
| Population | | | | | |
| Total Population | 13,684 | 1,252 | 0 | 0 | 1,252 |
| Noise-Sensitive Facilities | | | | | |
| Churches | 34 | 0 | 0 | 0 | 0 |
| Schools | 8 | 0 | 0 | 0 | 0 |
| Libraries | 0 | 0 | 0 | 0 | 0 |
| Hospitals | 0 | 0 | 0 | 0 | 0 |
| Nursing Homes | 0 | 0 | 0 | 0 | 0 |

Notes:

- * 14 CFR Part 150 Land Use Compatibility Guidelines indicate that residential land uses are compatible with noise levels below 65 DNL. Counts of housing units below 65 DNL are provided for informational purposes only.
- 1. Homes that have previously received sound insulation.
- 2. Homes that have an avigation easement.
- 3. Homes that were previously offered sound insulation but declined.
- 4. Homes that have not received and were never offered sound insulation or avigation easement by the CAAA.

Source: Landrum & Brown, 2007.

development of the recommendations and have not objected to the measures being included in the study. If fully implemented, new development around the Airport would be compatible with Airport development and anticipated noise levels.

Mitigation Commitments: Mitigation for this alternative includes offering sound insulation to homes affected by significant noise levels and providing relocation assistance to the residents that would be displaced to clear the RPZ.

Sound Insulation

The CRAA prepared an update to the CMH Part 150 Study in 2007.⁵ One of the recommendations of the 2007 Part 150 Study was to offer sound insulation to eligible homes located within and adjacent⁶ to an approved 65 DNL noise contour (Measure LU-1). If Alternative C2b is selected as the preferred alternative and implemented, the sound insulation eligibility boundary would be updated to reflect the area graphically depicted on **Exhibit 5.2-4, 2012 Alternative C2b - Proposed Sound Insulation Boundary**. Within this boundary, there are 297 housing units⁷ that would be eligible for sound insulation under this alternative. There are homes within the 65 DNL Noise Contour that were built within a published NEM (graphically depicted in green on Exhibit 5.2-4). The 2007 Part 150 Study concluded that these homes are not eligible for noise mitigation due to the FAA's Final Policy on Noise Mitigation, published in 1998. An analysis was conducted for this EIS to determine if there would be an increase in noise in these areas as a result of implementing this alternative. It was found that alternative C2b would not increase noise levels in these areas. Therefore, these homes would not be eligible for noise mitigation in this EIS.

Relocation Assistance

A negotiated purchase program would be offered to the 36 properties located inside and adjacent to the RPZ. A negotiated purchase program is the purchase of real property through negotiation (i.e., the offer of fair market value) and involves the payment of relocation assistance and moving expenses, which is consistent with the *Uniform Relocation Assistance and Real Property Acquisition Policies Act* (49 CFR Part 24). The acquired property would be converted to open space, which is a land use that is compatible with RPZs. Section 5.3, *Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks*, discusses the relocation assistance that would be offered to these residents.

⁵ Final 2007 Part 150 Noise Compatibility Program Update, November 2007. FAA Record of Approval is anticipated by June 1, 2008.

⁶ To remain consistent with FAA and CRAA policies regarding sound insulation eligibility, housing units that are adjacent to the 65+ DNL would be included in the sound insulation program to preserve the integrity of contiguous, stable, and viable residential neighborhoods of similar housing design, construction type and materials.

⁷ This includes 226 unmitigated housing units that are within the 65 DNL Noise Contour and 71 unmitigated housing units that are within the proposed sound insulation boundary adjacent to the 65 DNL Noise Contour for this alternative that would be eligible for mitigation.

5.2.2.4 Alternative C3a: 2012 Relocate Runway 10R/28L 702 Feet to the South – Noise Abatement Scenario A

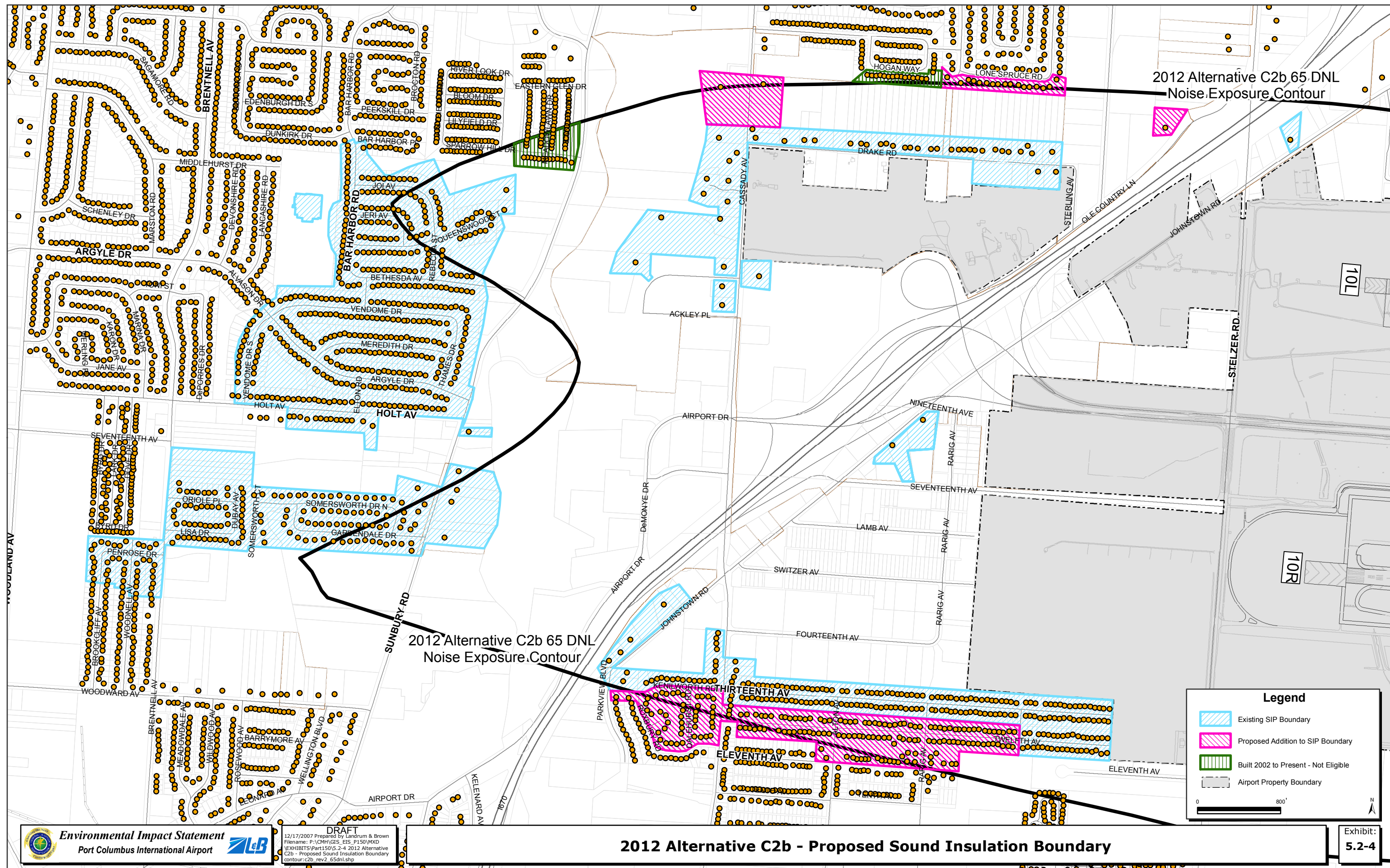
This section provides a summary of the potential land use impacts, including impacts to residential population, housing units, and noise-sensitive facilities affected by the 2012 Alternative C3a noise contour.

Land Use Incompatibilities: Table 5.2-7 shows the number of housing units, residents, and noise-sensitive facilities located within the 2012 Alternative C3a noise contour. Table 5.2-4 shows a comparison of the number of housing units, residents, and noise-sensitive facilities for all of the 2012 alternatives. There are 700 housing units and an estimated 1,729 residents located within the 65+ DNL of the 2012 Alternative C3a noise contour. A total of 337 of those housing units have received sound insulation (301 in Columbus and 36 in Mifflin Township) from the CRAA and are therefore considered previously mitigated. There are no churches, schools, libraries, hospitals, or nursing homes located within the 65+ DNL of the 2012 Alternative C3a noise contour.

Consistency with Local Land Use Plan: This section describes the affects of this alternative on land use and the compatibility with local land use plans. Alternative C3a would result in impacts to a number of facilities that could affect future land use patterns within the surrounding jurisdictions.

The construction of replacement Runway 10R/28L 702 feet to the south of existing Runway 10R/28L would result in the acquisition of the same 36 residential properties for clearing the RPZ and vacating East 13th Avenue, as discussed above for Alternative C2a (see Exhibit 5.3-3 in Section 5.3, *Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks*). These 36 properties are the eastern most properties on the street and are bounded by Airport property on two sides. The acquisition of the property and relocation of the residents from these 36 properties is considered an impact of this alternative. Because the 35 housing units and one vacant lot represents a small percentage of the overall neighborhood and are located on the edge of the neighborhood, removing these housing units would not constitute a significant impact to the overall pattern of land use in this area. Section 5.3, *Socioeconomic Impacts; Environmental Justice; and Children's Environmental Health and Safety Risks*, discusses the potential impacts of these acquisitions.

The Airport Golf Course, located east of the Airport, would be reconfigured as a result of relocating Runway 10R/28L 702 feet to the south. The approach lighting system, which currently is located in the golf course, would be shifted 702 feet to the south and cause at least nine holes to be reconfigured. During re-construction of the golf course, it is the desire of both the CRAA and the City of Columbus to maintain a minimum of nine holes. The feasibility of this will be further analyzed and determined during the design phase of the project. Because the land use is expected to be maintained and the golf course would return to a full 18-hole facility, a temporary impact to the existing land use is expected. However, the land use would return to its existing use when the golf course reconfiguration was completed. The reconfiguration of the Airport Golf Course is discussed further in Section 5.7, *Department of Transportation Section 4(f) Lands*.



**Table 5.2-7
HOUSING, POPULATION, AND NOISE-SENSITIVE FACILITY
INCOMPATIBILITIES - 2012 ALTERNATIVE C3a
Port Columbus International Airport**

| | 60-65 DNL * | 65-70 DNL | 70-75 DNL | 75+ DNL | 65+ DNL |
|--------------------------------------------------------------|------------------------|----------------------|----------------------|--------------------|--------------------|
| Housing Units | | | | | |
| Columbus | 5,526 | 642 | 0 | 0 | 642 |
| Mitigated | | | | | |
| Sound Insulated ¹ | 357 | 301 | 0 | 0 | 301 |
| Easement ² | 338 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated ³ | 81 | 80 | 0 | 0 | 80 |
| Not Previously Mitigated ⁴ | 4,750 | 261 | 0 | 0 | 261 |
| Mifflin Township | 12 | 58 | 0 | 0 | 58 |
| Mitigated | | | | | |
| Sound Insulated | 0 | 36 | 0 | 0 | 36 |
| Easement | 0 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 1 | 18 | 0 | 0 | 18 |
| Not Previously Mitigated | 11 | 4 | 0 | 0 | 4 |
| Gahanna | 31 | 0 | 0 | 0 | 0 |
| Mitigated | | | | | |
| Sound Insulated | 2 | 0 | 0 | 0 | 0 |
| Easement | 0 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 0 | 0 | 0 | 0 | 0 |
| Not Previously Mitigated | 29 | 0 | 0 | 0 | 0 |
| Jefferson Township | 15 | 0 | 0 | 0 | 0 |
| Mitigated | | | | | |
| Sound Insulated | 0 | 0 | 0 | 0 | 0 |
| Easement | 0 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 0 | 0 | 0 | 0 | 0 |
| Not Previously Mitigated | 15 | 0 | 0 | 0 | 0 |
| Total Housing Units | 5,584 | 700 | 0 | 0 | 700 |
| Population | | | | | |
| Total Population | 13,792 | 1,729 | 0 | 0 | 1,729 |
| Noise-Sensitive Facilities | | | | | |
| Churches | 37 | 0 | 0 | 0 | 0 |
| Schools | 8 | 0 | 0 | 0 | 0 |
| Libraries | 0 | 0 | 0 | 0 | 0 |
| Hospitals | 0 | 0 | 0 | 0 | 0 |
| Nursing Homes | 0 | 0 | 0 | 0 | 0 |

Notes:

- * 14 CFR Part 150 Land Use Compatibility Guidelines indicate that residential land uses are compatible with noise levels below 65 DNL. Counts of housing units below 65 DNL are provided for informational purposes only.
- 1. Homes that have previously received sound insulation.
- 2. Homes that have an avigation easement.
- 3. Homes that were previously offered sound insulation but declined.
- 4. Homes that have not received and were never offered sound insulation or avigation easement by the CAAA.

Source: Landrum & Brown, 2007.

Mitigation Commitments: Mitigation for this alternative includes offering sound insulation to homes affected by significant noise levels and providing relocation assistance to the residents that would be displaced to clear the RPZ.

Sound Insulation

The CRAA prepared an update to the CMH Part 150 Study in 2007.⁸ One of the recommendations of the 2007 Part 150 Study is to offer sound insulation to eligible homes that are located within and adjacent⁹ to an approved 65 DNL noise contour (Measure LU-1). If Alternative C3a were selected as the preferred alternative and implemented, the sound insulation eligibility boundary would be updated to reflect the area graphically depicted on **Exhibit 5.2-5, 2012 Alternative C3a - Proposed Sound Insulation Boundary**. Within this boundary, there are 313 housing units¹⁰ that would be eligible for sound insulation under this alternative. There are homes within the 65 DNL Noise Contour that were built within a published Noise Exposure Map (graphically depicted in green on Exhibit 5.2-5). The 2007 Part 150 Study concluded that these homes are not eligible for noise mitigation due to the FAA's Final Policy on Noise Mitigation, published in 1998. An analysis was conducted for this EIS to determine if there would be an increase in noise in these areas as a result of implementing this alternative. It was found that alternative C3a would not increase noise levels in these areas. Therefore, these homes would not be eligible for noise mitigation in this EIS.

Relocation Assistance

A negotiated purchase program would be offered to the 36 properties located inside and adjacent to the RPZ. A negotiated purchase program is the purchase of real property through negotiation (i.e., the offer of fair market value) and involves the payment of relocation assistance and moving expenses, which is consistent with the *Uniform Relocation Assistance and Real Property Acquisition Policies Act* (49 CFR Part 24). The acquired property would be converted to open space, which is a land use that is compatible with RPZs. Section 5.3, *Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks*, discusses the relocation assistance that would be offered to these residents.

⁸ Final 2007 Part 150 Noise Compatibility Program Update, November 2007. FAA Record of Approval is anticipated in June 2008.

⁹ To remain consistent with FAA and CRAA policies regarding sound insulation eligibility, housing units that are adjacent to the 65+ DNL would be included in the sound insulation program to preserve the integrity of contiguous, stable, and viable residential neighborhoods of similar housing design, construction type, and materials.

¹⁰ This includes 259 unmitigated housing units that are within the 65 DNL Noise Contour and 54 unmitigated housing units that are within the proposed sound insulation boundary adjacent to the 65 DNL Noise Contour for this alternative that would be eligible for mitigation.

5.2.2.5 Alternative C3b: 2012 Relocate Runway 10R/28L 702 Feet to the South – Noise Abatement Scenario B (Sponsor’s Proposed Project)

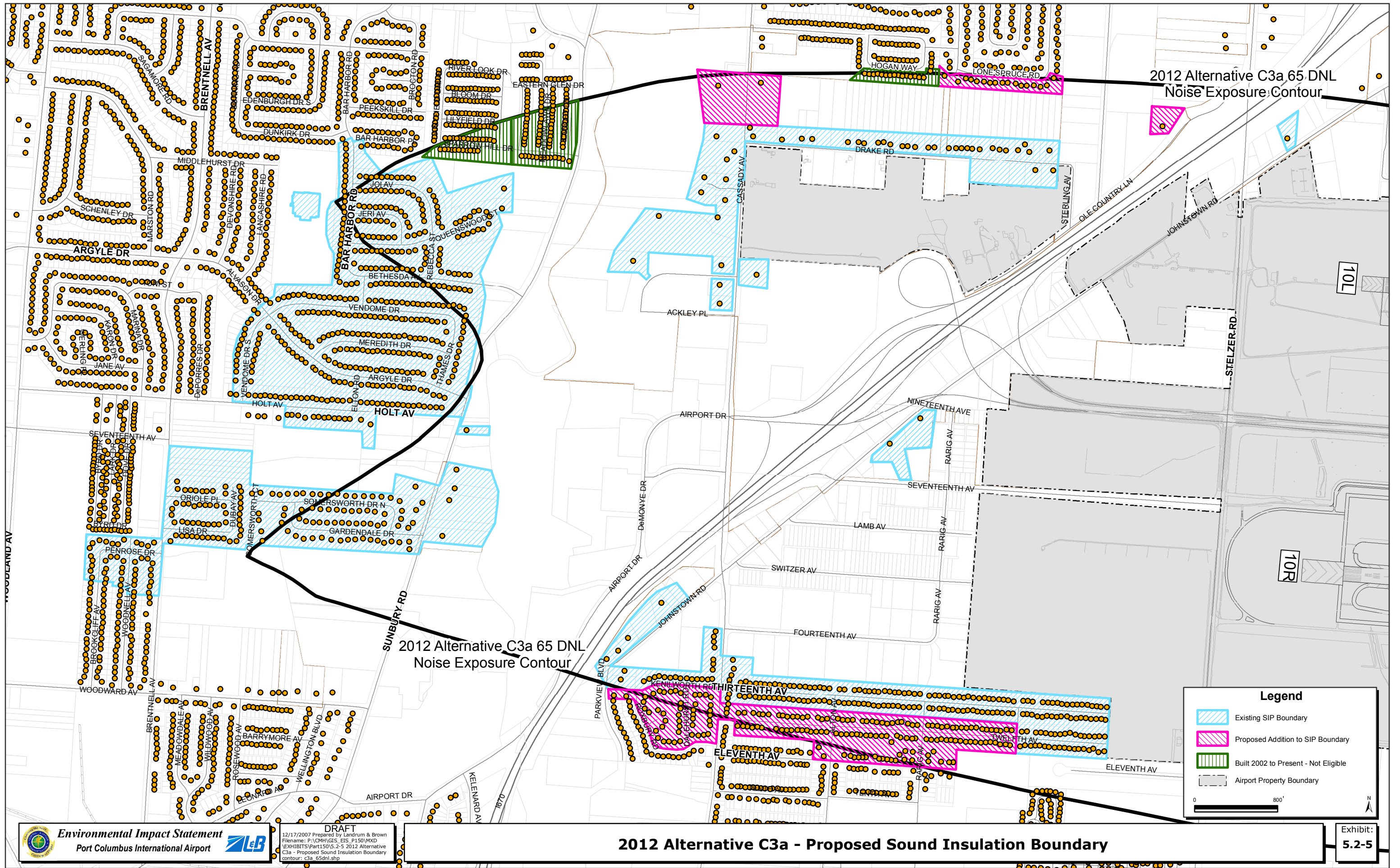
This section provides a summary of the potential land use impacts, including impacts to residential population, housing units, and noise-sensitive facilities affected by the 2012 Alternative C3b noise contour.

Land Use Incompatibilities: Table 5.2-8 shows the number of housing units, residents, and noise-sensitive facilities located within the 2012 Alternative C3b noise contour. Table 5.2-4 shows a comparison of the number of housing units, residents, and noise-sensitive facilities for all of the 2012 alternatives. There are 473 housing units and an estimated 1,168 residents located within the 65+ DNL of the 2012 Alternative C3b noise contour. A total of 248 of those housing units have received sound insulation (212 in Columbus and 36 in Mifflin Township) from the CRAA and are therefore considered previously mitigated. There are no churches, schools, libraries, hospitals, or nursing homes located within the 65+ DNL of the 2012 Alternative C3b noise contour.

Consistency with Local Land Use Plan: This section describes the affects of this alternative on land use and the compatibility with local land use plans. Alternative C3b would result in impacts to a number of facilities that could affect future land use patterns within the surrounding jurisdictions. The impacts described under Alternative C3a for the acquisition of homes in East Columbus and the reconfiguration of the Airport Golf Course would remain the same for Alternative C3b.

In addition, Alternative C3b includes a number of recommended land use measures from the 2007 Part 150 Study that could potentially impact land use and development patterns around the Airport. The land use measures are intended to enhance land use compatibility surrounding the Airport through the implementation of land use restrictions. Currently, the City of Columbus and Franklin County have adopted an AEO district that corresponds to the 65-70, 70-75, and 75+ DNL contours of the most recent NEM for the Airport. Within the AEO, development standards are enacted that restrict residential land uses in the highest noise areas and provide for avigation easements in the areas of 65 to 70 DNL. Two problems have occurred with this program: lack of implementation by the City of Gahanna and Jefferson Township and the AEO boundary changes every time the NEMs are updated for the Airport (which occurs every three years on average).

In response to these issues, the 2007 Part 150 Study recommends that a fixed-boundary approach be implemented where the boundaries are larger than the 65 DNL of the most recent NEM (see Chapter Four, Exhibit 4-10). The approach of creating fixed-boundaries is recommended as Measure LU-12 in the 2007 Part 150 Study. This approach to land use planning was discussed with the local planning jurisdictions on several occasions throughout the development of the 2007 Part 150 Study. While it is not possible to get assurance on the implementation of the recommendations of the land use measures in a Part 150 Study, the local planning jurisdictions have participated in the



**Table 5.2-8
HOUSING, POPULATION, AND NOISE-SENSITIVE FACILITY
INCOMPATIBILITIES - 2012 ALTERNATIVE C3b
Port Columbus International Airport**

| | 60-65 DNL * | 65-70 DNL | 70-75 DNL | 75+ DNL | 65+ DNL |
|--------------------------------------------------------------|------------------------|----------------------|----------------------|--------------------|--------------------|
| Housing Units | | | | | |
| Columbus | 5,233 | 415 | 0 | 0 | 415 |
| Mitigated | | | | | |
| Sound Insulated ¹ | 440 | 212 | 0 | 0 | 212 |
| Easement ² | 471 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated ³ | 100 | 68 | 0 | 0 | 68 |
| Not Previously Mitigated ⁴ | 4,222 | 135 | 0 | 0 | 135 |
| Mifflin Township | 12 | 57 | 0 | 0 | 57 |
| Mitigated | | | | | |
| Sound Insulated | 0 | 36 | 0 | 0 | 36 |
| Easement | 0 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 1 | 19 | 0 | 0 | 19 |
| Not Previously Mitigated | 11 | 2 | 0 | 0 | 2 |
| Gahanna | 148 | 1 | 0 | 0 | 1 |
| Mitigated | | | | | |
| Sound Insulated | 3 | 0 | 0 | 0 | 0 |
| Easement | 0 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 0 | 1 | 0 | 0 | 1 |
| Not Previously Mitigated | 145 | 0 | 0 | 0 | 0 |
| Jefferson Township | 27 | 0 | 0 | 0 | 0 |
| Mitigated | | | | | |
| Sound Insulated | 0 | 0 | 0 | 0 | 0 |
| Easement | 4 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 0 | 0 | 0 | 0 | 0 |
| Not Previously Mitigated | 23 | 0 | 0 | 0 | 0 |
| Total Housing Units | 5,420 | 473 | 0 | 0 | 473 |
| Population | | | | | |
| Total Population | 13,387 | 1,168 | 0 | 0 | 1,168 |
| Noise-Sensitive Facilities | | | | | |
| Churches | 32 | 0 | 0 | 0 | 0 |
| Schools | 8 | 0 | 0 | 0 | 0 |
| Libraries | 0 | 0 | 0 | 0 | 0 |
| Hospitals | 0 | 0 | 0 | 0 | 0 |
| Nursing Homes | 0 | 0 | 0 | 0 | 0 |

Notes:

- * 14 CFR Part 150 Land Use Compatibility Guidelines indicate that residential land uses are compatible with noise levels below 65 DNL. Counts of housing units below 65 DNL are provided for informational purposes only.
- 1. Homes that have previously received sound insulation.
- 2. Homes that have an avigation easement.
- 3. Homes that were previously offered sound insulation but declined.
- 4. Homes that have not received and were never offered sound insulation or avigation easement by the CAAA.

Source: Landrum & Brown, 2007.

development of the recommendations and have not objected to the measures being included in the study. If fully implemented, new development around the Airport would be compatible with airport development and anticipated noise levels.

Mitigation Commitments: Mitigation for this alternative includes offering sound insulation to homes affected by significant noise levels and providing relocation assistance to the residents that would be displaced to clear the RPZ.

Sound Insulation

The CRAA prepared an update to the CMH Part 150 Study in 2007.¹¹ One of the recommendations of the 2007 Part 150 Study is to offer sound insulation to eligible homes that are located within and adjacent¹² to an approved 65 DNL noise contour (Measure LU-1). If Alternative C3b were selected as the preferred alternative and implemented, the sound insulation eligibility boundary would be updated to reflect the area graphically depicted on **Exhibit 5.2-6, 2012 Alternative C3b - Proposed Sound Insulation Boundary**. Within this boundary, there are 261 housing units¹³ that would be eligible for sound insulation under this alternative. There are homes within the 65 DNL Noise Contour that were built within a published Noise Exposure Map (graphically depicted in green on Exhibit 5.2-6). The 2007 Part 150 Study concluded that these homes are not eligible for noise mitigation due to the FAA's Final Policy on Noise Mitigation, published in 1998. An analysis was conducted for this EIS to determine if there would be an increase in noise in these areas as a result of implementing this alternative. It was found that alternative C3b would not increase noise levels in these areas. Therefore, these homes would not be eligible for noise mitigation in this EIS.

Relocation Assistance

A negotiated purchase program would be offered to the 36 properties located inside and adjacent to the RPZ. A negotiated purchase program is the purchase of real property through negotiation (i.e., the offer of fair market value) and involves the payment of relocation assistance and moving expenses, which is consistent with the *Uniform Relocation Assistance and Real Property Acquisition Policies Act* (49 CFR Part 24). The acquired property would be converted to open space, which is a land use that is compatible with RPZs. Section 5.3, *Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks*, discusses the relocation assistance that would be offered to these residents.

¹¹ Final 2007 Part 150 Noise Compatibility Program Update, November 2007. FAA Record of Approval is anticipated by June 1, 2008.

¹² To remain consistent with FAA and CRAA policies regarding sound insulation eligibility, housing units that are adjacent to the 65+ DNL would be included in the sound insulation program to preserve the integrity of contiguous, stable, and viable residential neighborhoods of similar housing design, construction type and materials.

¹³ This includes 187 unmitigated housing units that are within the 65 DNL Noise Contour and 74 unmitigated housing units that are within the proposed sound insulation boundary adjacent to the 65 DNL Noise Contour for this alternative that would be eligible for mitigation.

5.2.3 FUTURE CONDITIONS: 2018

The following discusses the land use impacts of the Sponsor's Proposed Project and its alternatives in 2018, which includes quantifying the number of residential and other noise-sensitive land uses that are impacted by aircraft noise for each of the 2018 alternatives. The 2018 alternatives do not change the off-airport land use impacts discussed for the 2012 alternatives. The only difference between the 2012 and 2018 alternatives from a land use perspective is the number of housing units located within the various noise contours. These noise contours are based on the latest forecasts of operating activity for the Airport. However, forecasts are projections that become more speculative and less dependable the farther away from the current year you go. Therefore, for land use mitigation planning (such as sound insulation), the CRAA would commit to the proposed mitigation described for the alternatives under 2012 conditions. Furthermore, the CRAA would commit to updating the Airport's NEMs 12 to 18 months after the opening of the proposed runway to identify any potential changes in noise levels that may warrant an update to the sound insulation program boundaries.

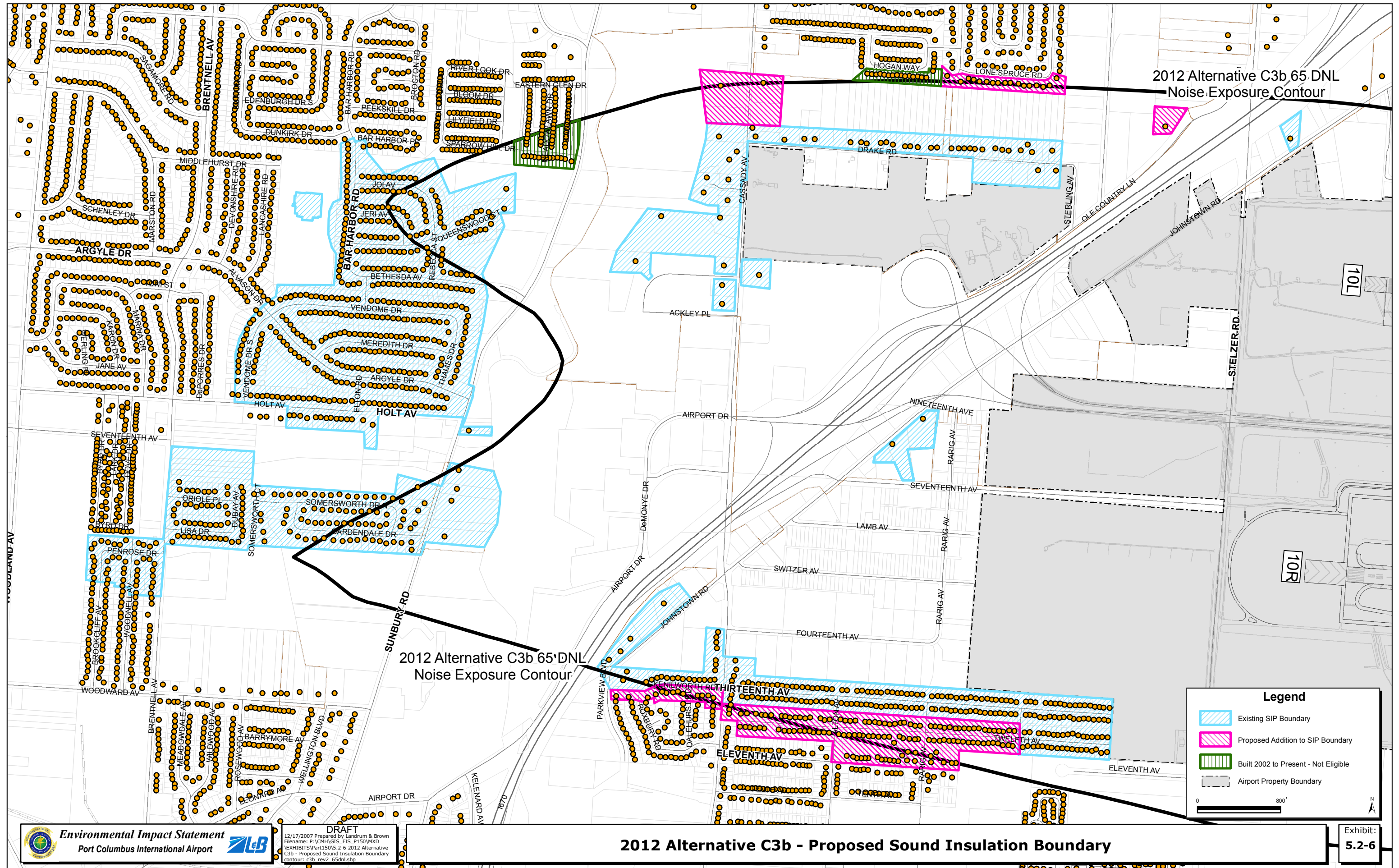
5.2.3.1 Alternative A: 2018 No Action

This section provides a summary of the residential population, housing units, and noise-sensitive facilities affected by noise levels for the 2018 Alternative A: No Action.

Land Use Incompatibilities: Table 5.2-9 shows the number of housing units, residents, and noise-sensitive facilities located within the 2018 Alternative A: No Action noise contour. There are 819 housing units and an estimated 2,023 residents located within the 65+ DNL of the 2018 Alternative A: No Action noise contour. Of those 819 housing units, 762 are within the City of Columbus and 57 are within Mifflin Township. A total of 382 of those housing units have received sound insulation and are therefore considered previously mitigated. There are four churches and one school located within the 65 DNL of the 2018 Alternative A: No Action noise contour, the Mt. Judia Church, the Eternal Life Church of Christ, the Christian Outreach Ministries, the Wonderland Community Church (which has an aviation easement), and the South Mifflin Elementary School (which has received sound insulation and an aviation easement has been conveyed to the CRAA). Table 5.2-10 summarizes the housing unit and population impacts for all of the 2018 alternatives.

5.2.3.2 Alternative C2a: 2018 Relocate Runway 10R/28L 800 Feet to the South – Noise Abatement Scenario A

This section provides a summary of the potential land use impacts, including impacts to residential population, housing units, and noise-sensitive facilities affected by the 2018 Alternative C2a noise contour.



**Table 5.2-9
HOUSING, POPULATION, AND NOISE-SENSITIVE FACILITY
INCOMPATIBILITIES - 2018 ALTERNATIVE A: NO ACTION
Port Columbus International Airport**

| | 60-65 DNL * | 65-70 DNL | 70-75 DNL | 75+ DNL | 65+ DNL |
|--------------------------------------------------------------|------------------------|----------------------|----------------------|--------------------|--------------------|
| Housing Units | | | | | |
| Columbus | 5,591 | 762 | 0 | 0 | 762 |
| Mitigated | | | | | |
| Sound Insulated ¹ | 301 | 347 | 0 | 0 | 347 |
| Easement ² | 241 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated ³ | 94 | 73 | 0 | 0 | 73 |
| Not Previously Mitigated ⁴ | 4,955 | 342 | 0 | 0 | 342 |
| Mifflin Township | 17 | 57 | 0 | 0 | 57 |
| Mitigated | | | | | |
| Sound Insulated | 1 | 35 | 0 | 0 | 35 |
| Easement | 0 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 2 | 18 | 0 | 0 | 18 |
| Not Previously Mitigated | 14 | 4 | 0 | 0 | 4 |
| Gahanna | 256 | 0 | 0 | 0 | 0 |
| Mitigated | | | | | |
| Sound Insulated | 3 | 0 | 0 | 0 | 0 |
| Easement | 0 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 1 | 0 | 0 | 0 | 0 |
| Not Previously Mitigated | 252 | 0 | 0 | 0 | 0 |
| Jefferson Township | 105 | 0 | 0 | 0 | 0 |
| Mitigated | | | | | |
| Sound Insulated | 0 | 0 | 0 | 0 | 0 |
| Easement | | | | | |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 0 | 0 | 0 | 0 | 0 |
| Not Previously Mitigated | 32 | 0 | 0 | 0 | 0 |
| Total Housing Units | 5,969 | 819 | 0 | 0 | 819 |
| Population | | | | | |
| Total Population | 14,743 | 2,023 | 0 | 0 | 2,023 |
| Noise-Sensitive Facilities | | | | | |
| Churches | 39 | 4 | 0 | 0 | 4 |
| Schools | 7 | 1 | 0 | 0 | 1 |
| Libraries | 0 | 0 | 0 | 0 | 0 |
| Hospitals | 0 | 0 | 0 | 0 | 0 |
| Nursing Homes | 0 | 0 | 0 | 0 | 0 |

Notes:

- * 14 CFR Part 150 Land Use Compatibility Guidelines indicate that residential land uses are compatible with noise levels below 65 DNL. Counts of housing units below 65 DNL are provided for informational purposes only.
- 1. Homes that have previously received sound insulation.
- 2. Homes that have an avigation easement.
- 3. Homes that were previously offered sound insulation but declined.
- 4. Homes that have not received and were never offered sound insulation or avigation easement by the CAAA.

Source: Landrum & Brown, 2007.

**Table 5.2-10
COMPARISON OF HOUSING, POPULATION, AND NOISE-SENSITIVE
FACILITY INCOMPATIBILITIES FOR 2018 ALTERNATIVES
Port Columbus International Airport**

| CATEGORY | 2018 ALTERNATIVE A: NO ACTION | 2018 ALTERNATIVE C2a | 2018 ALTERNATIVE C2b | 2018 ALTERNATIVE C3a | 2018 ALTERNATIVE C3b |
|----------------------------------------------------------------------------------------------------|----------------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Housing Units | | | | | |
| 65-70 DNL | 819 | 811 | 740 | 738 | 656 |
| 70-75 DNL | 0 | 0 | 0 | 0 | 0 |
| 75+ DNL | 0 | 0 | 0 | 0 | 0 |
| 65+ DNL | 819 | 811 | 740 | 738 | 656 |
| Population | | | | | |
| 65-70 DNL | 2,023 | 2,003 | 1,828 | 1,823 | 1,620 |
| 70-75 DNL | 0 | 0 | 0 | 0 | 0 |
| 75+ DNL | 0 | 0 | 0 | 0 | 0 |
| 65+ DNL | 2,023 | 2,003 | 1,828 | 1,823 | 1,620 |
| Noise Sensitive Facilities (Churches, Schools, Libraries, Hospitals, and Nursing Homes) | | | | | |
| 65-70 DNL | 5 | 2 | 2 | 1 | 2 |
| 70-75 DNL | 0 | 0 | 0 | 0 | 0 |
| 75+ DNL | 0 | 0 | 0 | 0 | 0 |
| 65+ DNL | 5 | 2 | 2 | 1 | 2 |

Source: Landrum & Brown, 2007.

**Table 5.2-11
2018 ALTERNATIVE C2a HOUSING, POPULATION, AND
NOISE-SENSITIVE FACILITY INCOMPATIBILITIES
Port Columbus International Airport**

| | 60-65 DNL* | 65-70 DNL | 70-75 DNL | 75+ DNL | 65+ DNL |
|-------------------------------------------------|---------------|--------------|--------------|------------|--------------|
| Housing Units | | | | | |
| Columbus | 5,752 | 754 | 0 | 0 | 754 |
| Mitigated | | | | | |
| Sound Insulated | 408 | 234 | 0 | 0 | 234 |
| Easement | 624 | 18 | 0 | 0 | 18 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 89 | 79 | 0 | 0 | 79 |
| Not Previously Mitigated | 4,631 | 423 | 0 | 0 | 423 |
| Mifflin Township | 13 | 56 | 0 | 0 | 56 |
| Mitigated | | | | | |
| Sound Insulated | 0 | 36 | 0 | 0 | 36 |
| Easement | 0 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 1 | 19 | 0 | 0 | 19 |
| Not Previously Mitigated | 12 | 1 | 0 | 0 | 1 |
| Gahanna | 13 | 1 | 0 | 0 | 1 |
| Mitigated | | | | | |
| Sound Insulated | 1 | 0 | 0 | 0 | 0 |
| Easement | 0 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 0 | 1 | 0 | 0 | 1 |
| Not Previously Mitigated | 12 | 0 | 0 | 0 | 0 |
| Jefferson Township | 70 | 0 | 0 | 0 | 0 |
| Mitigated | | | | | |
| Sound Insulated | 0 | 0 | 0 | 0 | 0 |
| Easement | 38 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 0 | 0 | 0 | 0 | 0 |
| Not Previously Mitigated | 32 | 0 | 0 | 0 | 0 |
| Total Housing Units | 5,848 | 811 | 0 | 0 | 811 |
| Population | | | | | |
| Total Population | 14,445 | 2,003 | 0 | 0 | 2,003 |
| Noise-Sensitive Facilities | | | | | |
| Churches | 36 | 2 | 0 | 0 | 2 |
| Schools | 9 | 0 | 0 | 0 | 0 |
| Libraries | 0 | 0 | 0 | 0 | 0 |
| Hospitals | 0 | 0 | 0 | 0 | 0 |
| Nursing Homes | 0 | 0 | 0 | 0 | 0 |

Notes:

- * 14 CFR Part 150 Land Use Compatibility Guidelines indicate that residential land uses are compatible with noise levels below 65 DNL. Counts of housing units below 65 DNL are provided for informational purposes only.
- 1. Homes that have previously received sound insulation.
- 2. Homes that have an aviation easement.
- 3. Homes that were previously offered sound insulation but declined.
- 4. Homes that have not received and were never offered sound insulation or aviation easement by the CRAA.

Source: Landrum & Brown, 2007.

Land Use Incompatibilities: Table 5.2-11 shows the number of housing units, residents, and noise-sensitive facilities located within the 2018 Alternative C2a noise contour. Table 5.2-10 shows a comparison of the number of housing units, residents, and noise-sensitive facilities for all of the 2018 alternatives. There are 811 housing units and an estimated 2,003 residents located within the 65+ DNL of the 2018 Alternative C2a noise contour. A total of 270 of those housing units have received sound insulation (234 in Columbus and 36 in Mifflin Township) from the CRAA and are therefore considered previously mitigated. There are two churches located within the 65 DNL of the 2018 Alternative C2a noise contour, the East Mount Olivet Baptist Church and the Greater Works Ministries. There are no schools, libraries, hospitals, or nursing homes located within the 65+ DNL of the 2018 Alternative C2a noise contour.

Consistency with Local Plans: 2018 Alternative C2a would have the same impacts to local plans as the 2012 Alternative C2a.

Mitigation Commitments: 2018 Alternative C2a would include the same mitigation as the 2012 Alternative C2a.

5.2.3.3 Alternative C2b: 2018 Relocate Runway 10R/28L 800 Feet to the South – Noise Abatement Scenario B

This section provides a summary of the potential land use impacts, including impacts to residential population, housing units, and noise-sensitive facilities affected by the 2018 Alternative C2b noise contour.

Land Use Incompatibilities: Table 5.2-12 shows the number of housing units, residents, and noise-sensitive facilities located within the 2018 Alternative C2b noise contour. Table 5.2-10 shows a comparison of the number of housing units, residents, and noise-sensitive facilities for all of the 2018 alternatives. There are 740 housing units and an estimated 1,828 residents located within the 65+ DNL of the 2018 Alternative C2b noise contour. A total of 238 of those housing units have received sound insulation (201 in Columbus and 36 in Mifflin Township) from the CRAA and are therefore considered previously mitigated. There are two churches located within the 65 DNL of the 2018 Alternative C2b noise contour, the East Mount Olivet Baptist Church and the Greater Works Ministries. There are no schools, libraries, hospitals, or nursing homes located within the 65+ DNL of the 2018 Alternative C2b noise contour.

Consistency with Local Plans: 2018 Alternative C2b would have the same impacts to local plans as the 2012 Alternative C2b.

Mitigation Commitments: 2018 Alternative C2b would include the same mitigation as the 2012 Alternative C2b.

**Table 5.2-12
HOUSING, POPULATION, AND NOISE-SENSITIVE FACILITY
INCOMPATIBILITIES - 2018 ALTERNATIVE C2b
Port Columbus International Airport**

| | 60-65 DNL * | 65-70 DNL | 70-75 DNL | 75+ DNL | 65+ DNL |
|--------------------------------------------------------------|------------------------|----------------------|----------------------|--------------------|--------------------|
| Housing Units | | | | | |
| Columbus | 5,420 | 683 | 0 | 0 | 683 |
| Mitigated | | | | | |
| Sound Insulated ¹ | 451 | 201 | 0 | 0 | 201 |
| Easement ² | 701 | 1 | 0 | 0 | 1 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated ³ | 94 | 74 | 0 | 0 | 74 |
| Not Previously Mitigated ⁴ | 4,174 | 407 | 0 | 0 | 407 |
| Mifflin Township | 11 | 56 | 0 | 0 | 56 |
| Mitigated | | | | | |
| Sound Insulated | 0 | 36 | 0 | 0 | 36 |
| Easement | 0 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 1 | 19 | 0 | 0 | 19 |
| Not Previously Mitigated | 10 | 1 | 0 | 0 | 1 |
| Gahanna | 48 | 1 | 0 | 0 | 1 |
| Mitigated | | | | | |
| Sound Insulated | 2 | 0 | 0 | 0 | 0 |
| Easement | 0 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 0 | 1 | 0 | 0 | 1 |
| Not Previously Mitigated | 46 | 0 | 0 | 0 | 0 |
| Jefferson Township | 96 | 0 | 0 | 0 | 0 |
| Mitigated | | | | | |
| Sound Insulated | 0 | 0 | 0 | 0 | 0 |
| Easement | 55 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 0 | 0 | 0 | 0 | 0 |
| Not Previously Mitigated | 41 | 0 | 0 | 0 | 0 |
| Total Housing Units | 5,575 | 740 | 0 | 0 | 740 |
| Population | | | | | |
| Total Population | 13,770 | 1,828 | 0 | 0 | 1,828 |
| Noise-Sensitive Facilities | | | | | |
| Churches | 29 | 2 | 0 | 0 | 2 |
| Schools | 6 | 0 | 0 | 0 | 0 |
| Libraries | 0 | 0 | 0 | 0 | 0 |
| Hospitals | 0 | 0 | 0 | 0 | 0 |
| Nursing Homes | 0 | 0 | 0 | 0 | 0 |

Notes:

- * 14 CFR Part 150 Land Use Compatibility Guidelines indicate that residential land uses are compatible with noise levels below 65 DNL. Counts of housing units below 65 DNL are provided for informational purposes only.
- 1. Homes that have previously received sound insulation.
- 2. Homes that have an avigation easement.
- 3. Homes that were previously offered sound insulation but declined.
- 4. Homes that have not received and were never offered sound insulation or avigation easement by the CAAA.

Source: Landrum & Brown, 2007.

5.2.3.4 Alternative C3a: 2018 Relocate Runway 10R/28L 702 Feet to the South – Noise Abatement Scenario A

This section provides a summary of the potential land use impacts, including impacts to residential population, housing units, and noise-sensitive facilities affected by the 2018 Alternative C3a noise contour.

Land Use Incompatibilities: Table 5.2-13 shows the number of housing units, residents, and noise-sensitive facilities located within the 2018 Alternative C3a noise contour. Table 5.2-10 shows a comparison of the number of housing units, residents, and noise-sensitive facilities for all of the 2018 alternatives. There are 738 housing units and an estimated 1,823 residents located within the 65+ DNL of the 2018 Alternative C3a noise contour. A total of 295 of those housing units have received sound insulation (259 in Columbus and 36 in Mifflin Township) from the CRAA and are therefore considered previously mitigated. There are three churches, Aenon Missionary Baptist Church, East Mount Olivet Baptist Church, and the Greater Works Ministries, located within the 65 DNL of the 2018 Alternative C3a noise contour. There are no schools, libraries, hospitals, or nursing homes located within the 65+ DNL of the 2018 Alternative C3a noise contour.

Mitigation Recommendations: Mitigation for this alternative is discussed for the 2012 Alternative C3a conditions.

Consistency with Local Plans: Land use consistency is discussed in the section describing the 2012 Alternative C3a.

**Table 5.2-13
HOUSING, POPULATION, AND NOISE-SENSITIVE FACILITY
INCOMPATIBILITIES - 2018 ALTERNATIVE C3a
Port Columbus International Airport**

| | 60-65 DNL* | 65-70 DNL | 70-75 DNL | 75+ DNL | 65+ DNL |
|-------------------------------------------------|---------------|--------------|--------------|------------|--------------|
| Housing Units | | | | | |
| Columbus | 5,870 | 681 | 0 | 0 | 681 |
| Mitigated | | | | | |
| Sound Insulated | 393 | 259 | 0 | 0 | 259 |
| Easement | 589 | 23 | 0 | 0 | 23 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 87 | 81 | 0 | 0 | 81 |
| Not Previously Mitigated | 4,801 | 318 | 0 | 0 | 318 |
| Mifflin Township | 13 | 56 | 0 | 0 | 56 |
| Mitigated | | | | | |
| Sound Insulated | 0 | 36 | 0 | 0 | 36 |
| Easement | 0 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 1 | 19 | 0 | 0 | 19 |
| Not Previously Mitigated | 12 | 1 | 0 | 0 | 1 |
| Gahanna | 19 | 1 | 0 | 0 | 1 |
| Mitigated | | | | | |
| Sound Insulated | 2 | 0 | 0 | 0 | 0 |
| Easement | 0 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 0 | 1 | 0 | 0 | 1 |
| Not Previously Mitigated | 17 | 0 | 0 | 0 | 0 |
| Jefferson Township | 84 | 0 | 0 | 0 | 0 |
| Mitigated | | | | | |
| Sound Insulated | 0 | 0 | 0 | 0 | 0 |
| Easement | 54 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 0 | 0 | 0 | 0 | 0 |
| Not Previously Mitigated | 30 | 0 | 0 | 0 | 0 |
| Total Housing Units | 5,986 | 738 | 0 | 0 | 738 |
| Population | | | | | |
| Total Population | 14,785 | 1,823 | 0 | 0 | 1,823 |
| Noise-Sensitive Facilities | | | | | |
| Churches | 32 | 3 | 0 | 0 | 3 |
| Schools | 10 | 0 | 0 | 0 | 0 |
| Libraries | 0 | 0 | 0 | 0 | 0 |
| Hospitals | 0 | 0 | 0 | 0 | 0 |
| Nursing Homes | 0 | 0 | 0 | 0 | 0 |

Notes:

- * 14 CFR Part 150 Land Use Compatibility Guidelines indicate that residential land uses are compatible with noise levels below 65 DNL. Counts of housing units below 65 DNL are provided for informational purposes only.
- 1. Homes that have previously received sound insulation.
- 2. Homes that have an aviation easement.
- 3. Homes that were previously offered sound insulation but declined.
- 4. Homes that have not received and were never offered sound insulation or aviation easement by the CRAA.

Source: Landrum & Brown, 2007.

5.2.3.5 Alternative C3b: 2018 Relocate Runway 10R/28L 702 Feet to the South – Noise Abatement Scenario B (Sponsor's Proposed Project)

This section provides a summary of the potential land use impacts, including impacts to residential population, housing units, and noise-sensitive facilities affected by the 2018 Alternative C3b noise contour.

Land Use Incompatibilities: Table 5.2-14 shows the number of housing units, residents, and noise-sensitive facilities located within the 2018 Alternative C3b noise contour. Table 5.2-10 shows a comparison of the number of housing units, residents, and noise-sensitive facilities for all of the 2018 alternatives. There are 656 housing units and an estimated 1,620 residents located within the 65+ DNL of the 2018 Alternative C3b noise contour. A total of 256 of those housing units have received sound insulation (220 in Columbus and 36 in Mifflin Township) from the CRAA and are therefore considered previously mitigated. There are two churches, located within the 65+DNL of the 2018 Alternative C3b noise contour, the East Mount Olivet Baptist Church and the Greater Works Ministries. There are no schools, libraries, hospitals, or nursing homes located within the 65+ DNL of the 2018 Alternative C3b noise contour.

Consistency with Local Plans: 2018 Alternative C3b would have the same impacts to local plans as the 2012 Alternative C3b.

Mitigation Commitments: 2018 Alternative C3b would include the same mitigation as the 2012 Alternative C3b.

**Table 5.2-14
HOUSING, POPULATION, AND NOISE-SENSITIVE FACILITY
INCOMPATIBILITIES - 2018 ALTERNATIVE C3b
Port Columbus International Airport**

| | 60-65 DNL * | 65-70 DNL | 70-75 DNL | 75+ DNL | 65+ DNL |
|--------------------------------------------------------------|------------------------|----------------------|----------------------|--------------------|--------------------|
| Housing Units | | | | | |
| Columbus | 5,570 | 599 | 0 | 0 | 599 |
| Mitigated | | | | | |
| Sound Insulated ¹ | 432 | 220 | 0 | 0 | 220 |
| Easement ² | 705 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated ³ | 93 | 75 | 0 | 0 | 75 |
| Not Previously Mitigated ⁴ | 4,340 | 304 | 0 | 0 | 304 |
| Mifflin Township | 11 | 56 | 0 | 0 | 56 |
| Mitigated | | | | | |
| Sound Insulated | 0 | 36 | 0 | 0 | 36 |
| Easement | 0 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 1 | 19 | 0 | 0 | 19 |
| Not Previously Mitigated | 10 | 1 | 0 | 0 | 1 |
| Gahanna | 62 | 1 | 0 | 0 | 1 |
| Mitigated | | | | | |
| Sound Insulated | 2 | 0 | 0 | 0 | 0 |
| Easement | 0 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 0 | 1 | 0 | 0 | 1 |
| Not Previously Mitigated | 60 | 0 | 0 | 0 | 0 |
| Jefferson Township | 103 | 0 | 0 | 0 | 0 |
| Mitigated | | | | | |
| Sound Insulated | 0 | 0 | 0 | 0 | 0 |
| Easement | 62 | 0 | 0 | 0 | 0 |
| Unmitigated | | | | | |
| Eligible for Sound Insulation but not Insulated | 0 | 0 | 0 | 0 | 0 |
| Not Previously Mitigated | 41 | 0 | 0 | 0 | 0 |
| Total Housing Units | 5,746 | 656 | 0 | 0 | 656 |
| Population | | | | | |
| Total Population | 14,193 | 1,620 | 0 | 0 | 1,620 |
| Noise-Sensitive Facilities | | | | | |
| Churches | 30 | 2 | 0 | 0 | 2 |
| Schools | 5 | 0 | 0 | 0 | 0 |
| Libraries | 0 | 0 | 0 | 0 | 0 |
| Hospitals | 0 | 0 | 0 | 0 | 0 |
| Nursing Homes | 0 | 0 | 0 | 0 | 0 |

Notes:

* 14 CFR Part 150 Land Use Compatibility Guidelines indicate that residential land uses are compatible with noise levels below 65 DNL. Counts of housing units below 65 DNL are provided for informational purposes only.

1. Homes that have previously received sound insulation.

2. Homes that have an aviation easement.

3. Homes that were previously offered sound insulation but declined.

4. Homes that have not received and were never offered sound insulation or aviation easement by the CRAA.

Source: Landrum & Brown, 2007.